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ABSTRACT

There are major disparities in spending and taxation among California school districts. Available resources per pupil bear little relationship to the willingness of local communities to support education or the educational task to be performed. In addition, the State school finance system forces districts to rely on local property tax bases for all support in excess of an inadequate, State-guaranteed minimum. The system also neglects differences in pupils' educational needs. Some reform alternatives are needed, such as (1) a redistribution of funds by changing State aid formulas and possibly by instituting a Statewide property tax, (2) the introduction of a variable matching formula to implement a policy of equal support for equal tax effort, and (3) the launching in all districts of full State financing to equalize per pupil support according to need. (Author)

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May 1971

ALTERNATIVES IN CALIFORNIA SCHOOL FINANCE

Stephen M. Barro

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PREFACE

This report is an outgrowth of work undertaken to assist the Governor's Commission on Educational Reform, a citizens' advisory group that met during 1970 to develop recommendations concerning educational issues in California. School finance was one of the many areas studied by the Commission. Rand's contribution was to consult periodically with the group's school finance committee and to prepare a background paper on alternative ways of raising and allocating funds for the California public schools.

The present report is a revised and expanded version of that paper. Its purpose is to present an overview of policy options to an audience of California state officials, school administrators, and others concerned with educational finance. There is a high level of interest in this topic in California today, with school districts facing increasingly severe financial problems and with growing recognition of the need for major financial reform. The Governor's Commission no longer exists, but active studies of finance alternatives are being carried on by the State Departments of Education and Finance, the Legislative Branch, and other advisory groups. Although vigorous debate continues, there are indications that major changes in the school finance system are imminent in California.

The focus of the report is on broad issues of resource allocation and taxation. No attempt is made to evaluate specific, detailed proposals or to estimate their quantitative effects. Emphasis is placed on clarifying the relationship between school finance *criteria*--goals regarding levels of school support and the distribution of benefits and burdens--and specific *instruments* of financial reform. Accordingly, although the report is oriented to the existing situation in California, much of the discussion of alternatives may also apply to other states.

Support for this work was provided by a grant from the Carnegie Corporation of New York. The effort also benefitted substantially from ongoing research on intergovernmental financial relations sponsored by the Ford Foundation.

SUMMARY

The basic policy questions in California school finance are the following: (1) How much should be spent on the public schools? (2) How should the money be allocated among pupils or districts? (3) How should the financial burdens be distributed among taxpayers? Current emphasis on "equal educational opportunity" and concern about the relationship between inputs and outputs to schooling has complicated the issues and made it more difficult than in the past to develop acceptable proposals.

Under the existing system, California public schools are financed out of a combination of local school district property tax revenues and state aid funds (plus relatively small amounts of Federal aid). Amounts of local revenue raised by the districts depend on their *tax bases* (assessed property value per pupil), which vary widely from one district to another, and on the *tax rate* set by each local school board. State aid is allocated according to a formula that assures each district a certain dollar amount per pupil (known as the *foundation program*) provided that it levies at least a specified minimum rate of property tax. The formula is said to be *equalizing* in that districts with lower tax bases receive more aid per pupil. On the other hand, the law sets a "floor" (*basic aid*) to the state apportionment to even the wealthiest district.

California school spending appears higher than the national average when measured either in dollars per pupil or as a percentage of personal income. However, these outlays support ratios of professional staff to pupils that rank among the lowest in the country. The reason is that professional salaries and other costs are high in California and that a large fraction of the state's population is in school. Because of this unfavorable trade-off, citizens of the state face a difficult choice in deciding on the "proper" level of school support.

Distributional results are shaped by three properties of the existing system: (1) The state-guaranteed foundation program is insufficient to support an adequate program by current California standards; (2) districts must rely entirely on their own tax bases to supplement

the foundation program, even though supplementation is essential; (3) the aid formula makes no allowance for variations in "educational needs" among districts. These features give rise to serious financial disparities: Amounts expended per pupil are grossly unequal among districts; there is a perverse (negative) relationship between spending and educational need; and the tax rate required to support a *given* level of spending varies considerably from one community to another. In sum, school spending is not systematically related either to the willingness of communities to tax themselves or to the educational task to be performed, but primarily to economic factors that have little or nothing to do with education.

In considering alternative approaches to distributional reform, it is necessary to distinguish between the *criterion* question--How should resources be distributed among districts?--and the question of *means*--How should the system be structured to bring the desired distribution about? Regarding criteria, the dominant contemporary theme is *equal educational opportunity*, but that concept can be defined in a number of different ways. Formerly, the emphasis was on equalizing dollar or resource inputs; now it is increasingly on equality of educational outcomes. One can also distinguish three concepts of the proper degree of equalization: (1) a guarantee of "minimum adequate" support to all districts, (2) a policy of "equal support for equal effort," and (3) literal equality of per pupil support throughout the state.

Concrete proposals for change range from modest reforms within the existing framework to radical revision of fund allocation formulas and provisions for raising revenue. The former include redistributive modifications to the existing formula (higher foundation amounts, elimination of basic aid, a higher state-mandated tax rate, etc.), incorporation of explicit relative need and relative cost factors into the formulas, and a partial shift from local property taxes to a uniform statewide tax. With this set of changes, it would become possible to guarantee "minimum adequate" support to all districts, as is not the case under the present system.

In order to implement a policy of "equal support for equal effort" it would be necessary to replace the existing aid formula with one based on the principle of variable matching. One version of variable matching would guarantee each district at least a certain minimum increment in per pupil spending for each percentage point of tax rate in excess of the state-mandated rate. The state would pay the difference between the guaranteed amount and the amount actually raised locally. That would significantly increase the ability of less wealthy districts to provide better-than-minimal programs. A farther-reaching reform would be to shift from the property tax rate to a measure of effort based on personal income and to establish a single schedule between effort and support applicable to all districts. The effect would be to essentially eliminate economic influences on local school spending and to make differences in local willingness to pay the main cause of variations in school support.

The most radical distribution policy would be to provide uniform per pupil support throughout the state, allowing dollar allocations to vary only according to differences in educational need and costs of resources among districts. To do this, it would be necessary to centralize school finance decisions at the state level. Only in this way would it be possible to equalize pupils' opportunities everywhere in California. The "price," however, would be elimination of local autonomy in school finance.

Apart from the question of fund allocation, steps can be taken to redistribute the burdens of school taxes more equitably. The local property tax can be made less regressive; for example, by establishing exemptions for low-income taxpayers. A shift to a statewide property tax, either on all property or at least on industrial and commercial property, would contribute to greater equity both within and among districts. Alternative local tax sources should also be considered, although most seem to be technically or administratively infeasible. Almost any shift from local to state tax sources would tend to improve interdistrict equity. The contribution of such a shift to tax progressivity would depend on the specific mix of state tax sources. A shift to state income taxes would clearly be progressive; the effect of a shift to sales taxes is uncertain. Another part of the revenue system that needs reform is the provision for local voter control by means of tax override elections. A number of biases built into the existing system could be eliminated while preserving the principle of popular control of school support.

A set of four reform programs illustrates the range of choices available to California policymakers: (1) a Moderate Program, implementing the philosophy of minimum adequate support within the existing framework; (2) an Intermediate Program, extending the equalization principle to programs at a higher level than the state-specified minimum; (3) an Extensive Program, establishing a single schedule relating support to an income-based measure of effort; and (4) a Radical Program with the state assuming full responsibility for school finance.

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I. INTRODUCTION

PROBLEMS AND PRESSURES FOR CHANGE

Today, California faces a troubling amalgam of new and old problems in the financing of its public schools. The old problems, the targets of so much rhetoric, have become virtual cliches: The continuing pressure of rising costs on an overstrained local property tax system; disparities in expenditure and tax levels among districts; and the perennial controversy as to the proper balance between state and local responsibility for supporting education. Collectively, these make up what has long been referred to as "the school finance crisis." Yet, it is a strange kind of crisis to have gone unresolved so long; for the system--save for patchwork--is much the same now as it was ten and twenty years ago, and the same issues remain prominent in the academic literature and in public debate. Recurrent expressions of discontent by educators, taxpayers, and parents have apparently lacked the political force to effect major change. Thus, the partial solutions that are available, such as allocation formulas that would reduce expenditure and tax inequities, have not been implemented. With few exceptions over a remarkably long period, the system has succeeded in resisting or containing pressures for significant structural reform.

The qualitatively new element that now promises to break this pattern is the escalation of demands for substantive change in *education*, not educational finance *per se*. Most prominently, both nationally and in California, demands are being voiced for improved education for the disadvantaged. The poor and the ethnic minorities, often ill-served in the past by the public school system, are now asserting claims to a significantly larger share of its attention and resources. But they are not alone in wanting more of the schools. For a variety of reasons--many stemming from social changes that transcend education--there is broad-based discontent and loss of confidence in public schooling. Student and teacher militancy, criticism of the schools as "joyless and oppressive," and the increased interest in radical alternatives to public education are all visible signs of deep, current problems. The system's perceived shortcomings coupled with the ever-growing financial burden of school support have provoked demands from legislative bodies and the public for higher quality, more relevant, and more efficient education. These demands culminate in the rapidly growing movement to make the schools "accountable" for performance in turning resources into educational results.

Because of these pressures on education, the problems of school finance have become even more difficult and complicated than they were. At the very time that much more is being demanded of the schools, public dissatisfaction has made it harder for local school boards to raise the funds that might be used to buy improvements. This is strikingly demonstrated by the rising tide of tax override and bond election defeats in California. Furthermore, the new emphasis on accountability and cost-effectiveness in education has undercut the ability of administrators to justify higher taxes on the basis of salary increases, pupil-teacher ratios, and other input "requirements." Increasingly, there is insistence that requests for money be accompanied by assurances of performance. Yet, with today's imperfect knowledge of what works in education, neither school administrators nor anyone else can honestly predict what gains, if any, additional resources will produce. Thus, one effect of the new currents in education is to reduce further the expandibility of local revenues, placing greater pressure on more remote agencies--the Federal and the state governments--to assume larger shares of the financial load.

Contemporary pressures for educational reform also make it more difficult to decide how money should be allocated to individual districts and schools. Formerly, school finance reformers concentrated on the goal of fiscal equalization, and the degree of inequality in per pupil spending among districts stood as a simple, quantitative measure of the magnitude of their task. Today, largely because of concern about the disadvantaged, the goal of fiscal equalization is being bypassed, without ever having been realized. The new goal is *opportunity* or *outcome* equalization, either of which is far more difficult to define or attain than mere equality of funding. Consequently, there has arisen in school finance the new problem of quantifying "educational need," so that resources can be allocated in proportion to the difficulty of the educational task to be performed. At least temporarily, the gap between expectations and reality has actually broadened. What would once have been hailed as comprehensive reform--equalization of per pupil spending in each district--would now be considered just a step in the right direction. Much more drastic and politically more unpalatable redistribution would be required to meet the new "equal opportunity" criteria.

The short run effect of the transformation of school finance issues has been to make policymaking more complex. Finance can no longer be dealt with in isolation from more fundamental educational concerns. Relationships between spending and results and between resources and needs will be central considerations in developing the school finance systems of the future. It will be more difficult than in the past for officials to formulate and evaluate finance proposals since broader objectives and more intricate relationships and constraints will have to be taken into account.

In the long run, however, the outlook for thoroughgoing reform has probably brightened. The new educational concerns seem to have generated more political impact than the older financial issues ever did. The drive for expenditure and tax equalization, for example, which made little headway in California for many years, has now become closely linked to such basic social issues as poverty, racial equality, and urban decay. Today, financial reform, including substantial redistribution of resources, seems imminent in California with support from all parts of the political spectrum.

The immediate problem for educators and officials, facing both greater demands and expanded possibilities, is to sort out and assess the available policy options. The many proposals that have been offered in recent years--a good number as bills before the California State Legislature--reflect diverse objectives and approaches. Perhaps the most difficult task facing the policymaker is to distinguish the ends from the means in these proposals and to relate the two to each other. This report, an exploration of an array of policy objectives and policy instruments in school finance, is intended to aid him in that task.

THE EXISTING SYSTEM AND ITS RESULTS

A review of the workings of the current system of school support in California provides the essential background for an analysis of policy alternatives.

The public schools of California are financed out of a combination of local property tax revenues and state aid funds plus relatively small amounts of Federal aid. The amount of local revenue raised by each school district depends on its *tax base* (assessed property value per pupil) and the *tax rate* set by the local school board, subject to a voter-approved rate ceiling. State aid is allocated according to a formula that assures each district a certain dollar amount per pupil (known as the *foundation program*), regardless of the local tax base, provided that it makes a specified, minimum tax effort. The formula is said to be *equalizing* in that districts with lower tax bases receive more aid per pupil. On the other hand, a special provision sets a "floor" (*basic aid*) to the state apportionment to even the wealthiest districts.

The actual pattern of school spending and taxing is determined jointly by the state aid formula, the tax base in each district, and the willingness of each district to tax itself. Tax bases vary widely, reflecting both differences in the value of homes and the uneven distribution of industrial and commercial property throughout the state. Willingness to support the schools also varies among districts according to a whole array of local characteristics. In terms of dollars per pupil, the state as a whole spends somewhat more than the national average; but because salaries and other costs are high, these outlays support ratios of professional staff to pupils that rank among the lowest in the country. At the same time, because of those high costs and the large fraction of the state's population in school, Californians pay high school taxes, both absolutely and relative to income. In other words, a high price must be paid to support a relatively low level of staffing. This unpleasant fact is the source of unending conflict over the proper level of school support.

The most pressing issues in California school finance today do not concern the aggregate level of school support, however, but the distribution of educational resources and tax burdens. Here, three properties of the system are important: First, the state-guaranteed foundation program is insufficient to support schools in a manner that is acceptable by current standards. Second, districts must rely entirely on their own tax bases to supplement the foundation program, even though supplementation is essential. Third, the aid formula makes no allowance for variations in educational need--the difficulty of educating pupils--among districts. These features of the system are the causes of serious financial disparities:

1. Amounts expended per pupil are grossly unequal from one district to another.
2. The relationship between spending and "need" is perverse--more tends to be spent in wealthy districts where educational problems are minimal than in communities with heavy concentrations of poor or minority families where problems would be severe even with generous support.
3. The local tax rate required to support a *given* level of per pupil expenditures varies from one district to another. It frequently happens that one district can have both a better-supported program and a lower tax rate than another district with a smaller tax base.

In sum, financial support for the schools is not systematically related either to the willingness of communities to tax themselves or to the magnitude of educational tasks to be performed, but primarily to economic factors that have little or nothing to do with education.

Although it is widely acknowledged that these irrational and inequitable patterns need to be changed and that a better match between resources and needs would be desirable, this agreement does not extend to specifics. There are differing views as to both the degree to which there should be redistribution and the methods that should be used to bring it about. Often, these views are linked to positions on other issues related to educational finance, such as the scope of fiscal autonomy to be granted local districts, proper limits on the state's role in education, the desirability of expenditure control by local taxpayers, and the merits of automatic adjustment as opposed to direct annual determination of school aid by the legislature. It is not surprising, then, that a great many proposals are developed and offered each year that would affect resource distribution. The issue of distributional policy is a complex one and the one to which we assign highest priority in the main body of this report.

THE RANGE OF ALTERNATIVES

Underlying the complexities and technicalities of school finance are three basic policy issues:

- How much should be spent on the public schools?
- How should the money be allocated among pupils or districts?
- How should the financial burdens be distributed among taxpayers?

Alternative finance proposals reflect or imply differences in points of view concerning one or more of these questions. Clearly, none of the three has an objective, "correct" answer. Decisions among alternatives must depend heavily on values placed on education, equality, and other social goods. Nevertheless, there is a considerable role for analysis in clarifying issues for the policymaker and in establishing the consequences of possible choices.

Very little can be said about the issue of aggregate support. The fundamental question is how much citizens of the state value the benefits of education compared with other things that the same money might buy. But an intelligent discussion along those lines is precluded by the paucity of current knowledge concerning the relationship between financial input and educational results. We are unable, at present, to quantify either the gains that would be obtained by spending more on the schools or the losses that would presumably occur if we were to cut back existing levels of support. Until that intellectual bottleneck is broken, the level of support will continue to be determined on an ad hoc, political basis, most often as a by-product of decisions aimed at distributional goals.

The resource allocation issue has much richer analytical possibilities. Here, we have to distinguish between the *criterion* question--

How should resources be distributed among districts?--and the question of *means*--How should allocation formulas and tax structures be designed to bring the desired distribution about? Each answer to the first implies one or more possible solutions to the second.

Regarding allocation criteria, the dominant contemporary theme is *equal educational opportunity*. But that concept can be defined in a number of different ways. Formerly, the emphasis was on equalization of dollar or resource inputs; now it is increasingly on equality of educational outcomes. Formerly, also, "equalization" often meant no more than a guarantee of "minimum adequate" support to all districts. The definition today is more likely to be "equal support for equal effort" (without regard to wealth) or literal equality of per pupil support throughout the state. Each definition implies a different set of arrangements for collecting and distributing funds.

Turning to concrete financial measures, the possibilities range from modest reforms within the existing framework to thoroughgoing revision involving new methods of allocating state funds and major departures from the local property tax. The former include such changes as increases in the foundation level and in the state-mandated minimum local tax rate, elimination or reduction of basic aid, augmentation of supplementary support to low-wealth districts, and other redistributive modifications to the existing formulas. It would also be possible to incorporate relative need and relative cost factors into the formulas and to introduce price adjustment factors or other devices to improve the stability of school support over time. A partial shift from local property taxes to a uniform statewide property tax would be complementary to the above and would contribute significantly to a more equitable expenditure-tax relationship. With this set of changes, it would become possible to guarantee all districts equal access to a true "minimum adequate" program, which is not the case under the present system.

In order to implement a policy of "equal support for equal effort," it would be necessary to develop a new state aid formula based on the principle of variable matching. This is not incompatible with the idea of a state-guaranteed minimum program, but it would allow all districts equal access to support greater than, as well as equal to, the specified foundation level. Variable matching formulas can be written in a number of different ways depending on how the state chooses to define "effort" and on the constraints it wishes to impose on local choices or local shares of state aid. A shift from the property tax rate as a measure of effort to a measure based on personal income would represent a gain in equity; it would also facilitate adjustments for unequal noneducational property taxes ("overburden") if such adjustments were considered desirable. Existing supplementary aid provisions provide an important precedent and a model to build on in extending the concept of variable matching by the state.

Steps can also be taken to bring about greater equity in the distribution of both state and local school tax burdens. The local property tax can be modified in several ways to eliminate some of its more patently regressive features; for example, by establishing exemptions for low income taxpayers. Less "localness" in the property tax, which would be achieved by having a uniform statewide tax or at least a statewide tax on nonresidential property, would contribute to greater equity both within and among districts. Alternative local tax sources should also be considered, although the more likely candidates seem to be technically infeasible with the existing form of district organization. A continually debated issue is whether a greater share of school support should be financed out of general state taxes rather than either local or statewide property taxes. Any shift to state taxes, including property taxes, would tend to improve interdistrict equity. Whether such a change would produce a more progressive tax structure depends on the specific mix of state tax sources. A shift from property taxes to state income taxes would clearly be progressive; the effect of a shift to sales taxes is uncertain. Finally, another target for reform is the system of local voter control through tax override elections. The existing arrangement has major shortcomings. A number of changes can be made that would eliminate the more serious biases while preserving the concept of popular control of school support.

The most demanding distributional policy calls for literal equality of educational support throughout the state with allowance only for differences in educational need and costs of resources among districts.

To meet this criterion, it would be necessary to centralize decisions about school finance at the state level. Most questions of interdistrict equity would automatically be eliminated (except for possible controversies concerning appropriate need and cost adjustments). The "price" of this reform would, of course, be the disappearance of local autonomy in school finance. That prospect arouses much political opposition, but it is the logical consequence of a guarantee of full educational equality in California.

ORGANIZATION OF THE REPORT

The organization of the remainder of the report conforms to the order of this introductory discussion. The existing system is discussed in Secs. II and III, which are concerned, respectively, with the formal structure of school support and the system's operation. Policy alternatives pertaining to aggregate support, allocation of funds among districts, and the distribution of tax burdens are examined in Secs. IV, V, and VI. A final section brings together packages of reform measures that typify the range of choices now available to the state.

II. THE EXISTING STRUCTURE OF SCHOOL SUPPORT

The California school finance system comprises the whole set of institutional arrangements whereby revenues are collected and made available to individual school districts throughout the state. That system consists of five major elements:

1. Provisions governing the raising of revenues by local school districts.
2. Mechanisms and formulas for allocating state funds to the local districts.
3. Provisions for raising the state revenues needed to finance state-local subventions.
4. Procedures for distributing Federal aid funds.
5. Provisions imposing state controls on uses of funds at the local level.

This study is concerned primarily with the first three elements since they provide the basic framework within which state and local decisions determine the pattern of school spending and taxes. The state role in connection with Federal funds is a special problem that falls outside the scope of this report. Also, for purposes of this discussion, the mechanism for budgeting and resource allocation *within* school districts is not considered part of the state school finance system. Therefore, state constraints on local uses of funds (item 5) will not be referred to except where they impinge on other aspects of state financing. Items 1-3 provide the major targets for reform efforts. Accordingly, we begin with a description of those elements as they exist today in California.

THE ORGANIZATIONAL CONTEXT

A few points concerning the organization of public education in California may be helpful to readers who are not already familiar with the structure of the system. Public education in California for over 5 million pupils from kindergarten through junior college is provided by more than 1100 autonomous local school districts. There are four classes of districts: elementary (grades K-8 or K-6), high school (grades 9-12 or 7-12), junior college (grades 13-14), and unified (grades K-12 or K-14). They range in size from the Los Angeles Unified School District, with over 650,000 pupils, to small, rural elementary school districts with fewer than 50 pupils. The number of districts of each type and the number of pupils enrolled in each class of district is shown in Table 1.

Table 1

CALIFORNIA SCHOOL DISTRICTS 1968-1969

Item	*Unified*	*Elementary*	*High School*	*Junior College*	*All Types*
Number of districts	235	738	121	62	1,156
Average daily attendance	2,982,806	1,132,993	518,317	364,183	4,998,299
Percent of average daily attendance in state	59.7	22.7	10.4	7.3	100.0

SOURCE: *California Public Schools, Selected Statistics, 1968-69*, California State Department of Education, Sacramento, 1970.

All districts are *fiscally independent*. That is, they levy their own taxes and do not require approval of their budgets by other governmental bodies. The governing authority in each district for fiscal and other matters is a locally elected school board. The chief executive is a superintendent of schools, appointed by the board, who normally is responsible for budget preparation. The State Department of Education administers grants of state financial aid to local districts. However, most funds are distributed according to detailed formulas written into the *Education Code* by the State Legislature, leaving little scope for administrative discretion. Offices of county superintendents of schools also play a role in fiscal matters, but it is primarily one of disbursing agent and fiscal reporter. For practical purposes, fiscal transactions take place between local districts and the state.

PROVISIONS FOR RAISING LOCAL SCHOOL REVENUES

California, like most states, allows its school districts to levy local property taxes--and no others--to support public education. The tax base available to each district consists of the assessed value of real and personal property, including both residential and business property, within its boundaries. Assessed values are determined by county tax assessors except for certain special classes of property that are assessed by the state. In principle, each local board is empowered to set the tax rate for its district. In practice, that power is restricted in one important respect: The state has established statutory tax ceilings for each class of districts that can be raised only by approval of the local citizens in a "tax override" election. Since the statutory ceilings are set at levels that were long ago exceeded by nearly all districts,[*] local boards have limited discretion. Every few years they must go to the voters for permission to raise additional local funds for education. This restriction applies to what is termed the "general-purpose tax rate." In addition, the law allows for a considerable number of "permissive overrides"--added taxes, the proceeds of which are to be used for specified purposes, and which can be imposed by school boards without voter approval. These permissive overrides have become an increasingly important proportion of all local school taxes as voters have become more reluctant to approve general-purpose rate increases.

STATE AID

One of the fundamental educational policies of the state, embodied in the California Constitution,[†] is that part of the cost of local schools must be borne directly by the state out of state revenues. The state share of total state-local outlays in the postwar period has varied from 34.1 to 58.9 percent.[*] The bulk of the aid consists of general-purpose grants for current operations of the schools. In addition, there are many categorical grants for specified purposes. In the discussion of alternatives we will be concerned mainly with general-purpose aid, but a brief summary of categorical programs is included in the following account.

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[*] In 1967-1968, 98.5 percent of all districts had tax rates at or above the statutory maximum, according to *Property Tax and Expenditure Controls in Local School Districts*, Legislative Analyst, State of California, January 1970, p. 3.

[†] Article IX, Sec. 6.

The General-Purpose Aid Formula

California uses a slightly modified version of the so-called "foundation program" aid formula, the type in most common use in the United States. The formula is written so as to guarantee a minimum level of expenditure per pupil to each district, no matter how poor it may be in terms of local property value, provided that the district makes at least a stipulated minimum "tax effort."

In theory, the guaranteed level of per pupil spending--the foundation amount--is supposed to represent the outlay needed to provide a "minimum adequate" education to each pupil. The principle is that all districts making the required minimum effort should be equally able to provide a basic educational program. Districts willing and able to spend more than a "basic" program would then be free to supplement the basic program if they so desire.

In California, however, practice diverges from theory in a number of ways. The most important is that the foundation amounts prescribed in the law are far below levels that could be considered "minimum adequate" by current standards of school staffing, equipment, and operation. Therefore, additional local levies are essential, rather than optional, additions to the state-aided foundation program. This feature of state aid, in combination with other features to be described below, has important equity implications and is at the root of many reform proposals.

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[*] *Analysis of the Budget Bill of the State of California for the Fiscal Year July 1, 1970 to June 30, 1971, Report of the Legislative Analyst to the Joint Legislative Budget Committee*, California Legislature, 1970, p. 189. As noted in that report, the ratio can be computed in several ways. The figures cited here refer to general fund revenues of school districts and do not include other funds or expenses borne directly by the state. The ratio for 1968-1969 was estimated at 36.6 percent.

The way the formula operates is that the state pays each district the difference (if greater than zero) between the foundation amount per pupil and the amount raised locally by the required minimum tax. Since the latter amount is directly proportional to the local tax base, this means that less aid is distributed to districts with higher assessed property value per pupil. A district wealthy enough to raise the whole amount of the foundation program with the required minimum tax would receive no aid at all according to this provision. A hypothetical district with zero tax base would receive the entire foundation amount per pupil as a grant from the state. To that extent, the formula equalizes for differences in tax base per pupil among districts.

The California formula, however, has two other features that significantly shift the distribution of aid from what it would be with a "pure" form of foundation program. One is that there is an aid "floor," i.e., a minimum per pupil grant to all districts, no matter how high their tax base. This is termed "basic aid" and is provided for explicitly in the State Constitution.[*] Its effect is to substantially reduce the equalizing tendency of the original formula. Basic aid is provided to districts without regard to the minimum tax effort proviso. The other feature is that an additional grant ("supplementary aid") is provided specifically for districts with low assessed property value per pupil. To be eligible for supplementary aid, a district must impose a higher tax rate than the generally required minimum; but since most affected districts already tax themselves more than the specified amount, the effect is essentially to raise the foundation program for poorer districts.[†]

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[*] Article IX, Sec. 6, provides that ". . .there shall be apportioned to each school district in each fiscal year not less than one hundred and twenty dollars ($120) per pupil in average daily attendance during the next preceding fiscal year. . . ." The amount of the "floor" was raised by the legislature to $125, which is the present value.

[†] Actually, supplementary aid is provided as a matching grant in proportion to the extra local tax up to a specified ceiling. Since most low-wealth districts already tax over that ceiling, supplementary aid appears to them as a fixed amount.

The combined effect of these provisions is shown in Fig. 1 (an illustration of a generalized California-type plan without specific numerical values). As shown in the diagram, all districts receive the basic aid amount, *b*, per pupil. Districts with less than a certain amount of property value per pupil, v_1, receive a sufficient amount of additional aid to bring the total, including the amount raised locally by the required minimum tax, up to the foundation amount, *f*, per pupil. The amount of such additional aid ("equalization aid") that is provided varies inversely with property value per pupil, as shown by the downward sloping aid line. Districts with less than a certain amount of property value per pupil, v_0, also receive supplementary aid up to an amount *m* per pupil, provided they tax themselves at a higher stipulated rate. The irregular line, FF, running from left to right across the upper part of the diagram shows the total amount available to districts under the foundation and supplementary programs, including the portion they raise themselves with the required minimum tax. (The step at the

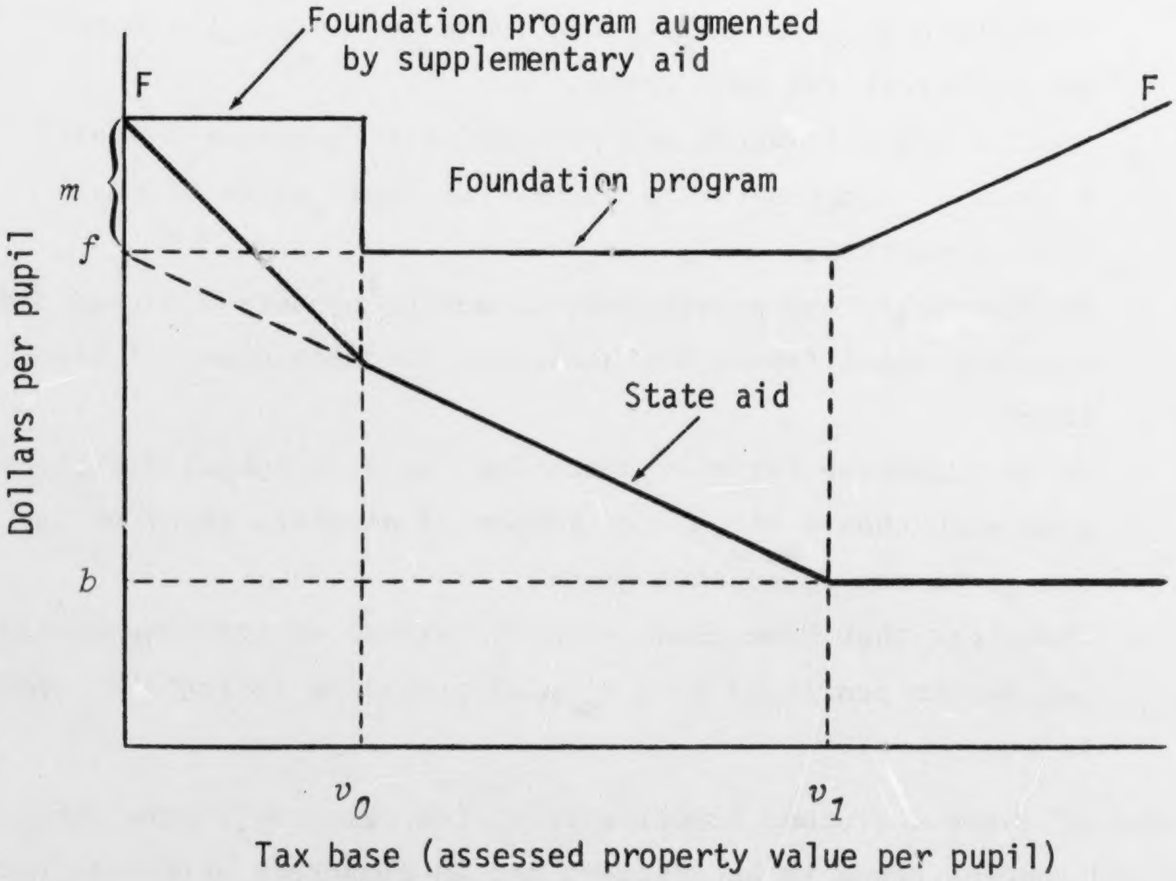

Fig. 1--A California-type state aid program

upper left represents the additional amount available to low-wealth districts levying the added tax required for full supplementary aid.) Note that districts with tax bases per pupil in excess of v_1 enjoy program levels above the foundation amount even without imposing more than the minimum rate. As was already noted, nearly all districts tax themselves more than the specified minimum rates, but the extra effort results in no additional aid. The proceeds from any increment in tax rate are strictly in proportion to local property value.

Although the underlying concepts are simple, actual aid computations are complex because a great many distinctions, special provisions, alternative computation methods, and conditions are written into the law. No attempt will be made here to itemize all the details. (They can be obtained from the California State Department of Education or direct from the *Education Code*.) However, to convey the nature of these provisions, a few of the more important ones are listed:

- Aid is computed separately for pupils in grades 1-3, 4-6, 7-8, 9-12, junior college, and adult programs. In general, foundation program amounts and required minimum tax rates are different for each group.
- Special aid allowances are provided for "necessary" small schools to compensate for higher per pupil costs of small-scale operation.
- Supplementary aid provisions, including amounts allotted and required local taxes, are different for each class of district.
- As an incentive for reorganization, unified school districts with more than a stipulated number of students enjoy an increase in the foundation amount.
- Districts that have class sizes in excess of state-specified maxima are penalized by a special provision in the aid computation.

Because of these and other complications, the relatively straightforward aid concept tends to be obscured and an elaborate worksheet must be followed to determine any district's aid entitlement.

Numerical values of the parameters of the aid formula have changed yearly or every few years, usually in conjunction with legislative action to increase the overall level of state aid. The most important values for the 1968-1969 school year (the latest year for which financial statistics are available) and for 1969-1970 are displayed in Table 2. It is difficult to appreciate the significance of these

Table 2

GENERAL-PURPOSE AID TO LOCAL SCHOOL DISTRICTS: AID FORMULA PARAMETERS FOR 1968-69 AND 1969-70

Item	*1968-69*	*1969-70*
Foundation program amount,[a] $ per pupil		
Elementary (1-3)	367	385
Elementary (K, 4-8)[b]	337	355
High School (9-12)	472	488
Junior College	628	643
Required minimum tax rate, % of assessed value		
Elementary (K-8)	1.00	1.00
High School (9-12)	.80	.80
Junior College	.25	.25
Basic aid amount, $ per pupil		
All grades	125	125
Supplementary aid[c]		
Maximum assessed value per pupil to qualify, $ per pupil		
Elementary	10,000	12,500
High School	20,000	24,000
Maximum amount of increase over foundation amount, $ per pupil		
Elementary	60	125
High School	40	72
Tax rate required for maximum supplementary aid, % of assessed value		
Elementary	1.60	2.00
High School	1.00	1.10

SOURCE: *California State Department of Education.*

NOTE: All per pupil amounts are calculated per pupil in average daily attendance (ADA).

[a] Does not include $20 per pupil unification bonus.

[b] Amounts for kindergarten pupils are adjusted to reflect less-than-half-day sessions.

[c] There is no supplementary aid for junior colleges.

figures except in relation to actual levels of school district spending and taxing. Therefore, commentary is reserved until after quantitative results of the system have been discussed.

Categorical Aid

Special-purpose grants are available to support education of specified categories of children, particular functions of school districts, acquisition of certain kinds of resources, instruction in specified subject areas, experimental and innovative programs, and for other purposes. There are far too many to describe individually and, in any case, the details are not germane to this discussion. As to how categorical aid is allocated, most of the programs fall into one of the following categories:

1. Aid provided by formula either for specified pupil groups within districts (primarily exceptional children, such as mentally retarded, handicapped, or gifted) or for specified services, such as pupil transportation or driver training. These are treated as adjuncts to the main aid formula.
2. Aid to districts consisting, essentially, of subsidies for acquisition of specified kinds of resources. The two important examples are aid for construction of school buildings and aid in the form of "free" state textbooks.
3. Aid for which districts are eligible according to specified criteria, but which are handled on an individual project basis, frequently requiring project proposals and evaluations. Examples are state-funded compensatory programs and special programs to improve instruction in reading and mathematics.
4. Aid for innovative activities, experiments, demonstration projects, and the like, for which there is no predetermined district entitlement and for which there is an important discretionary element in selection.

In addition, the state has a role in distributing Federal funds, which will not be discussed in this paper. Also, the state assumes certain costs of education directly that could also be considered financial aid. The most important example is the state's contribution to the teachers' retirement system.

Little will be said in the remainder of this paper about most of these programs since the main focus of the discussion will be on alternative ways of providing general purpose aid.

STATE REVENUES

In California, there are no specific ("earmarked") state taxes for the public schools. State aid to local districts is financed out of general revenue. The sources of aid funds are the same income, sales, business, and license taxes that finance other state programs and subventions to local governments. It is not meaningful to ask in what proportions the various kinds of taxes are used to support the schools. All the taxes go into a common general fund that is then allocated through the budget process for aid to education and other purposes.

It *is* meaningful, however, when an increase in the total amount of state aid is proposed, to ask out of what tax sources the increment will be financed. Since most reform proposals do involve such increases, an analysis of alternative tax sources is a necessary part of the study of options in school finance. Moreover, some reform proposals call for the creation of earmarked state taxes (e.g., a statewide property tax). This creates a need for an examination of the merits of such taxes compared with reliance on existing revenue sources. In this report, we focus mainly on the expenditure side of school finance questions. However, a review of relevant tax considerations is included and major alternatives are discussed.

A SCHEMATIC VIEW OF THE SYSTEM

Figure 2 shows how the local revenue, state aid, and state revenue provisions jointly provide the framework within which levels of spending in each district are determined. The main relationships are as follows (numbers in parentheses refer to boxes in the diagram): The state aid formula (1), in conjunction with characteristics of a particular

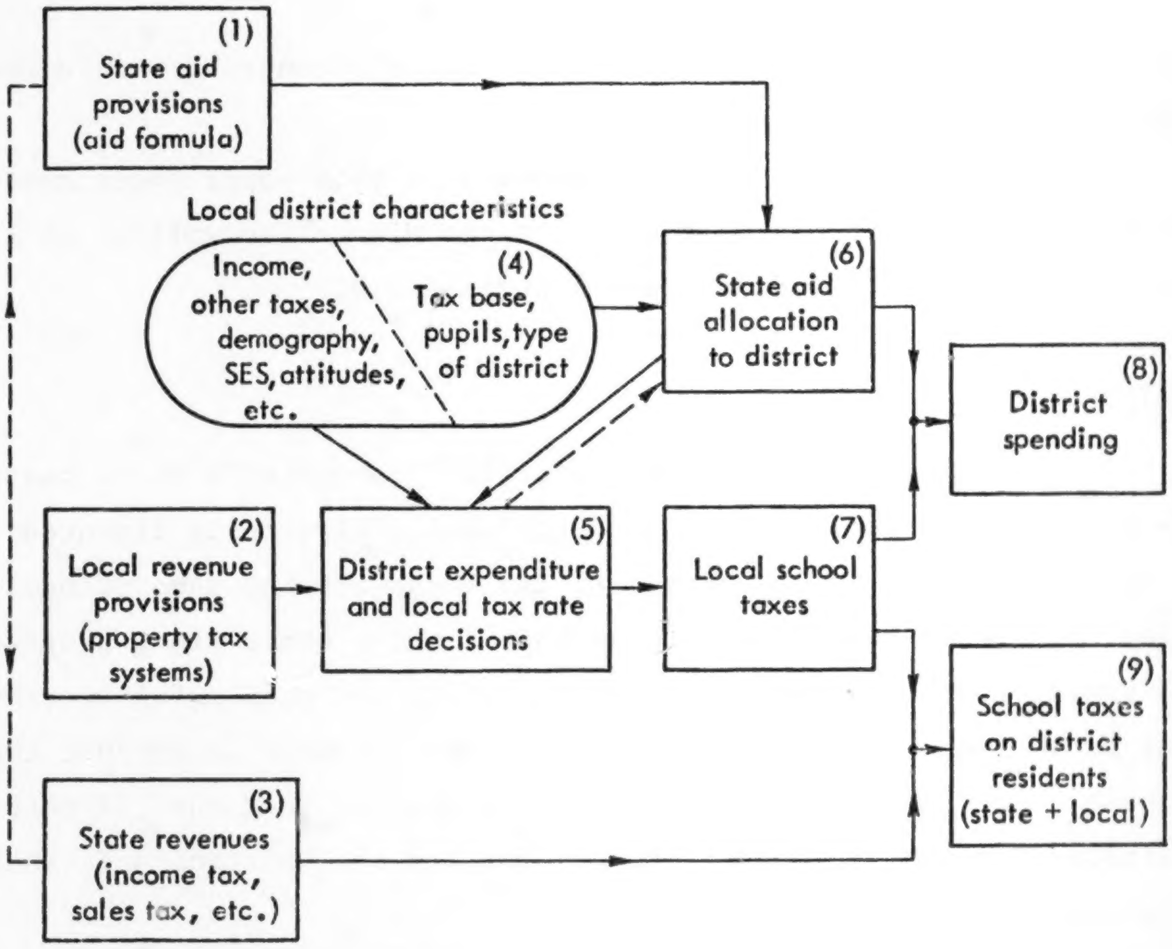
(1)
State aid provisions (aid formula)
Local district characteristics
Income, other taxes, demography, SES, attitudes, etc.
(4)
Tax base, pupils, type of district
(6)
State aid allocation to district
(8)
District spending
(2)
Local revenue provisions (property tax systems)
(5)
District expenditure and local tax rate decisions
(7)
Local school taxes
(9)
School taxes on district residents (state + local)
(3)
State revenues (income tax, sales tax, etc.)

Fig. 2--Relationships between the state school finance system and financial outcomes in local districts

district (4), determines the district's aid entitlement (6). The amount of aid, the requirements of state provisions governing local revenue raising (2), and a broad array of economic and other attributes of the district and its community influence local decisions on the total level of support to be provided and on the local tax rate (5). Among the factors that may affect local choices are such things as personal income in the district, levels of nonschool taxes, demographic and social characteristics of the community, and certain intangibles (attitudes, values, etc.). The process of arriving at a local decision may include a tax override election, if the district's specific situation requires one. There is a certain amount of "feedback" in the system, in the sense that local decisions may influence the amount of state aid (e.g., a low-wealth district may or may not decide to levy the tax rate needed to qualify for supplementary aid). This is indicated in the diagram by the dashed arrow connecting (5) and (6).

Once a district determines the amount it will tax itself, that amount (7) plus the state aid amount (6) equals the total to be expended (8). Simultaneously, the distribution of local school tax burdens is determined. The full educational tax burden on district residents (9) consists of both the local property tax (7) and state taxes attributable to school support (3). (The dashed line connecting state aid (1) and state taxes (3) serves as a reminder that state aid as well as local property levies must be paid for by the local taxpayer--a point often underemphasized in discussing the state's proper role.) Spending and tax rate decisions by *all* districts, which will differ markedly from one district to another because of differences in local circumstances, establish the statewide distributions of school expenditures and tax burdens.

The schematic diagram serves to illustrate an important point about California school finance: The key role played by local decisionmaking in establishing the pattern of school support. Notice that nowhere in the system does the state act directly to set either the overall level of school spending or the distribution of funds among districts. Both emerge out of the decentralized decisons of school boards and voters in all 1156 local districts. The state does, however, play a major role. It provides the institutional framework for fiscal decisions, imposes certain requirements and constraints on local decisionmakers, and, by setting the amount of aid each district receives, exerts considerable influence on the amount each district will spend. Nevertheless, the fact that state control is indirect is important. It means that state policies with regard to aid will not necessarily have the intended effect or have it to the intended degree. For example, a state attempt to increase school spending by $100 per pupil by providing that amount of added aid may have far less than the intended effect if districts respond by substituting the new state money for funds they would otherwise have raised locally. Thus, the state's intentions cannot always be translated into effective policy. An understanding of fiscal behavior at the local level, especially as it affects the local response to state actions, is an essential prerequisite to evaluation of policy alternatives in school finance. This point will be stressed as we examine resource allocation under the existing system in Sec. III.

III. RESOURCE ALLOCATION UNDER THE EXISTING SYSTEM

The foregoing description of the institutional framework provides the background for a closer look at the school finance system in operation. Distributional aspects of the system, in particular, require examination because of their prominence as targets for reform. The following questions need to be addressed: (1) What are the actual levels of spending and taxing and to what extent is there inequality among districts? (2) How are financial outcomes related to specific state provisions for school support? (3) What influences on local decision-making, other than the built-in institutional factors, contribute to the variations in educational programs and tax burdens we see throughout the state? The answers are of considerable importance in formulating and evaluating specific policy alternatives.

THE LEVEL OF SCHOOL SUPPORT

California School Support in 1968-69

Public elementary and secondary education in California is a more-than-four billion dollar enterprise serving over five million pupils. During the 1968-69 school year, general fund expenditures by districts for current operations amounted to $3.7 billion.[*] Several hundred million dollars more were expended for current operations outside of the general fund for construction of school buildings, educational expenses of county-level agencies, and functions performed directly by the state. In terms of support per pupil, the average general fund expenditure for current operations was $740. Expenditures of $704 per pupil were included in the aggregate defined as "total current expense of education."[†]

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[*] The financial data cited here are from *California Public Schools: Selected Statistics, 1968-69*, California State Department of Education, Sacramento, 1970.

[†] Total current expense of education includes outlays for administration, instruction, health services, pupil transportation, operation and maintenance of plant, and fixed charges. Total current expenditure consists of total current expense of education plus food service, community services, and capital outlay.

The latter is the measure of educational outlay most often used in comparing and assessing levels of support.

Of total school district general fund revenues in 1968-69, 59.0 percent came from local sources (almost entirely local property taxes), 34.6 percent from the state, and 6.4 percent from the Federal Government.* The corresponding per pupil amounts were $443, $260, and $48, respectively.

A breakdown of per pupil expenditures according to a slightly modified version of the conventional school accounting categories is shown in Table 3. Note, especially, that salaries of instructional personnel, including teachers, principals, supervisors, and others, are dominant in the budget, amounting to roughly 70 percent of total current expenses of education per pupil.

All of these magnitudes mean little in isolation. They need to be set into a context that permits comparisons and assessments of the relative adequacy of school support. Ideally, this would take the form of an analysis of the educational implications of the current level of spending in comparison with implications of alternative, higher or lower levels of outlay. However, too little is known about the connections between financial support and the results of schooling to support such an inquiry. Lacking that, a more limited (and wholly relative) perspective can be obtained by comparing current levels of support in the state with levels prevailing in other places and at other times. Two such comparisons, one looking across states, the other examining the trend in spending in California itself, are offered below.

Interstate Comparisons

How does California's support for public schools compare with other states'? Despite its straightforward appearance, this question receives highly divergent answers depending on what measure of support is examined.

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*Revenue data from *California School District Financial Analysis, 1968-69*, Research Department, California Teachers Association, 1969. Figures for junior colleges are included.

Table 3

ALLOCATION OF PER-PUPIL EXPENDITURES FOR CURRENT OPERATION

(All California School Districts: 1968-69)

Expenditure Category	*Amount per Pupil in ADA ($)*	*Percent of Total Current Expenditure*
Central administration	23.85	3.22
School administration and instruction		
Teachers salaries	404.84	54.72
Salaries of principals, supervisors, and other certificated personnel	66.91	9.04
Salaries of classified personnel	35.99	4.87
Textbooks and other books	4.96	0.67
Other expenses	23.80	3.22
Subtotal	(536.50)	(72.52)
Health services	6.44	0.87
Pupil transportation	14.16	1.91
Operation of plant	57.11	7.72
Maintenance of plant	24.72	3.34
Retirement, insurance, and other fixed charges	41.41	5.60
Total current expense of education	704.19	95.18
Food service	1.96	0.27
Community services	12.97	1.75
Capital outlay	20.72	2.80
Total current expenditures	739.84	100.00

SOURCE: *California Public Schools: Selected Statistics, 1968-69*, California State Department of Education, Sacramento, 1970.

In terms of dollar outlay, California appears to support its schools at a relatively high level. Its current expenditures per pupil in 1968-69 (including amounts in addition to the general fund expenditures referred to above) were $757,* sufficiently above the national average (7.8 percent) to rank 13th among the states. Relative to income,

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*Statistics cited in this section are taken from or calculated from data in *Rankings of the States, 1970*, Research Division, National Education Association, Washington, D.C., 1970. Definitions are not wholly consistent with those in the official state statistics, hence the discrepancy between this figure and the one cited earlier.

also, California ranked relatively high among the states with 5.1 percent of personal income allocated to public school support compared with 4.7 percent nationally. Those rankings, however, do not allow for interstate differences in costs. As it happens, instructional salaries in California in 1968-69 (by far the largest item in school budgets, as noted above) were the highest in the nation[*]--an average of $10,138 per member of the instructional staff or 23 percent higher than the United States average of $8272. Because of this, the relatively high level of spending translated into relatively low ratios of instructional staff in the schools. Looking at the total instructional staff, the state was only able to provide 45 personnel per 1000 pupils, which was 10.2 percent below the national average. Looking at teachers, specifically, the statewide pupil-teacher ratio, at 26.0, was 12.5 percent higher than the nationwide figure. On those two measures, California ranked 44th and 45th among the states, respectively. Only Alabama, Mississippi, Arkansas, Georgia, Tennessee, and Utah employed fewer educators in proportion to their pupil populations according to either measure. Thus, contrary to the impression one gets from the dollar figures, in terms of personnel resources per pupil, as reflected by a count of teachers and other instructional staff,[‡] California ranks very low nationally and is the lowest of all the wealthy industrial states. Therefore, two pictures emerge simultaneously: Californians pay somewhat more than average for their public schools, but in terms of staffing ratios in the schools, California appears to provide a conspicuously low level of support.

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[*] Excluding Alaska, for which data are not comparable because of its substantially higher cost of living. Data for Alaska are also excluded from other comparisons made in this section.

[†] These statistics do not include the junior colleges.

[‡] It can be contended that the low level of California school staffing in the numerical sense is made up for, at least in part, by higher instructional staff quality in California. Data on teacher training, for example, would probably show that the average California teacher is more extensively educated than the average teacher in most other states and, in particular, than in the other states that have low staffing ratios. However, evidence as to the value of more extensive teacher training in bringing about better pupil performance is negative or inconclusive, which makes the quality question impossible to resolve at this time. By the same token, however, evidence on the educational value of lower pupil-teacher ratios or higher staffing ratios is also inconclusive. Therefore, though they are suggestive, data on California's relatively low ratios do not, by any means, provide unambiguous policy guidance.

Spending in California Over Time

Evidence on the time trend in California school spending provides a different perspective of current support, but one that tends to reinforce the impression left by the interstate comparison. As with the latter, one's image of the relative level of current support depends on what specific measure is selected. Unadjusted dollar amounts, both total and per pupil, convey an image of rapid growth. As shown in Fig. 3,

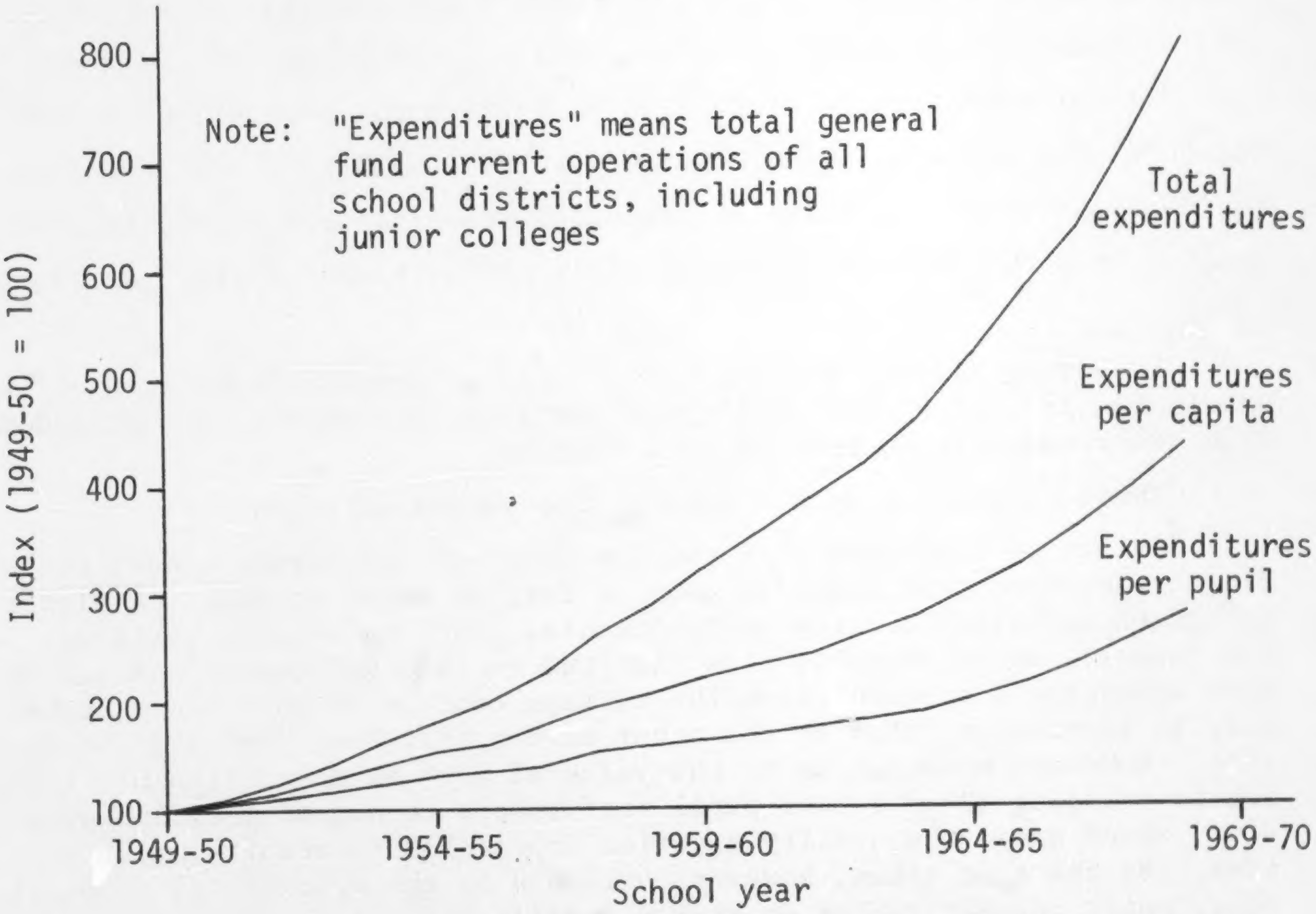

Fig. 3--Growth in California public school expenditures, 1949-1950 to 1968-1969 (from Controller, State of California, *Annual Report of Financial Transactions of School Districts*) over the 20-year period from 1949-50 to 1968-69, total dollar outlays in California multiplied eightfold while spending per pupil increased by 180 percent. Because school attendance increased much more rapidly than the total population during this period (the number of pupils was 16.6 percent of the population in 1949-50 and 26.1 percent in 1968-69), school spending per capita of population increased much faster than spending per pupil. Even when changes in the general price level are taken into account, the increase in the real per capita burden of school support over the period was 173 percent. Although per capita income increased considerably over the period, the percentage of personal income in the state allocated to support of the public schools doubled, increasing from 2.8 to 5.6 percent.

But what has all this additional outlay bought? The image of growth changes radically when changes in instructional salaries and other cost factors are taken into account. Figure 4 shows the results when expenditures per pupil are deflated by a specially constructed index of educational cost.* With all values expressed in 1957-59 constant dollars, the 20-year trend is virtually flat. Only after 1965, when sizeable Federal funds for compensatory education and other purposes first became available, was there a significant uptrend in real

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*The index consists of a weighted average of an index of average salaries of instructional personnel in California and the cost of services component of the consumer price index (CPI). The weights are 0.75 and 0.25, respectively. The former roughly corresponds with the fraction that instructional salaries make up of California school budgets. Salary data are from various issues of the *Digest of Educational Statistics*, Department of Health, Education and Welfare, Office of Education, Washington, D.C. and *Estimates of School Statistics*, Research Division, National Education Association, Washington, D.C. Data on the services component of the CPI are from the *Economic Report of the President, 1970*, U.S. Government Printing Office, Washington, D.C., 1970. An important cautionary note is that the index does not allow for possible increases in input quality over the years. To the extent that such increases took place, the index exaggerates the rate of price increase and leads to an understatement of the rate of growth in real educational outlays. However, there is no empirical evidence to support the view that there has been a significant quality increase in terms of educational output (pupil learning) per unit of school resources. Some of the problems of establishing such connections between the inputs and outputs of schooling are referred to in Sec. IV.

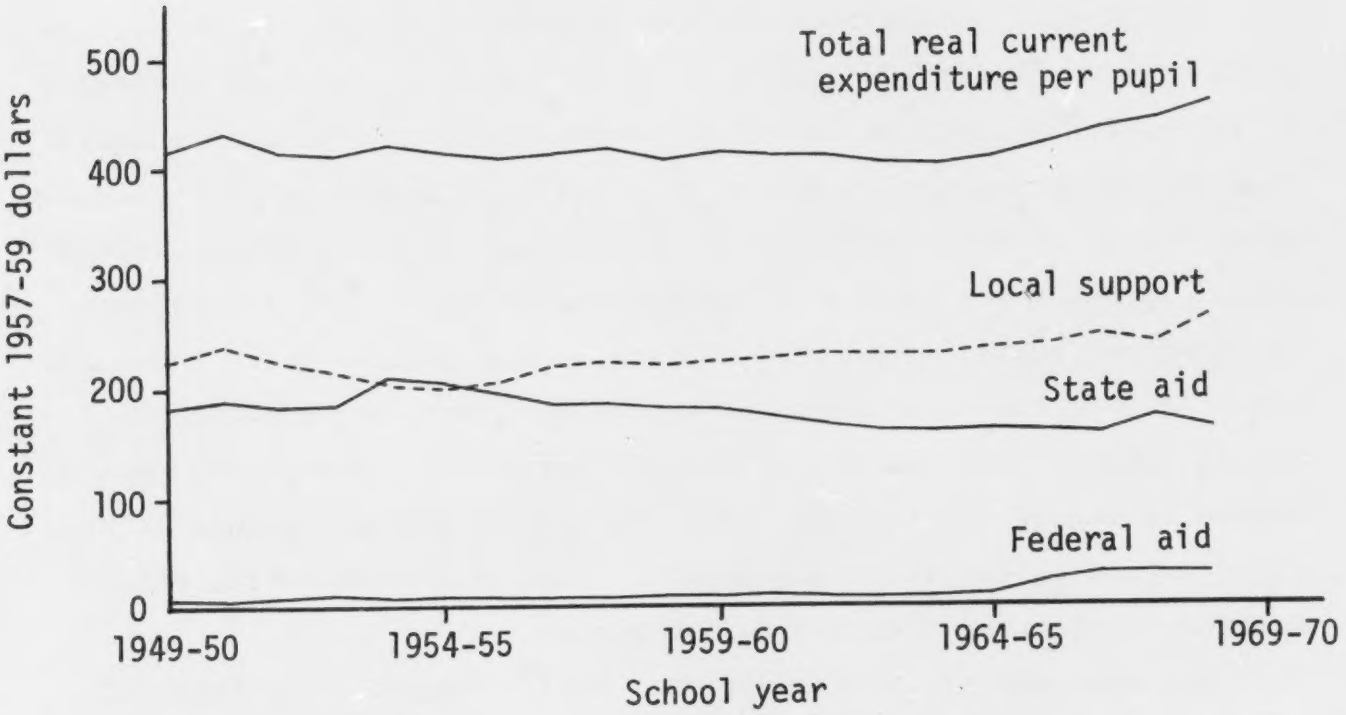

Fig. 4--Real public school expenditure per pupil in California, 1949-1950 to 1968-1969 (from Controller, State of California, *Annual Report of Financial Transactions of School Districts*)

expenditure per pupil. Exclusive of Federal funding, it can be seen from Fig. 4 that only a very slight increase in per pupil support from state and local sources has been registered over the whole 20-year period. That increase, as the figure makes evident, has been financed entirely out of local taxes, which, in fact, have also had to grow just to offset an actual decline in the real level of state support.

The seeming contradiction between a stable level of constant dollar expenditure per pupil and a rapidly rising level of constant dollar cost per capita is easy to explain arithmetically. Part of the explanation is that a cost of education index is used to deflate school spending while the general price level (consumer price index) is used to translate per capita cost into dollars of constant purchasing power. The change in the *relative* cost of education, i.e., the rise in education costs *over and above* the general price increase has necessitated a steady rise in real tax burdens to maintain a constant level of resources in the schools. The remainder of the explanation rests on the already noted increase in the proportion of the population in school, which also implies an increase in per capita outlay to provide a given level of per pupil support. The combined effect of the two factors has been to necessitate a 5.4 percent greater sacrifice of real per capita purchasing power each year to provide roughly constant ratios of professional staff and other resources to pupils enrolled.

The significance of a near-constant level of real support per pupil for 20 years must be assessed against a background of rapidly rising demands on the schools. Despite the escalation of demands for special education for the disadvantaged, general qualitative improvement, and more varied, "relevant" programs only minor increases in resources have been provided.* While this is understandable in light of the heavy increase in the school tax burden needed to sustain existing support, the fact remains that added resources have not been provided in proportions commensurate with the increase in performance expectations.

The static nature of California school support is underscored by a comparison with national trends. Growth in current expense per pupil for the whole U.S., deflating for increases in salaries and other costs, is represented by the solid line in Fig. 5. The trend in California support is indicated by the dashed line. Total growth in California from 1949-50 to 1968-69 was 14 percent compared to 33 percent nationally. Prior to 1965, while the nation as a whole provided modest annual increases in support, California support was stable or declining. All of California's growth occurred from 1965 on, but even in that period the rate of increase in the quantity of resources per pupil in the state (but not allowing for possible changes in resource quality) was below the national average.

To summarize, California provides a level of educational resources per pupil--especially in terms of staff/pupil ratios--that is low by national standards and that continues to grow less rapidly than in other states. At the same time, the real burden of school support--both absolutely and relative to income--has increased steadily. But unless California takes on even greater burdens of school support in the future--however they are financed--the prospect is that provisions for education in the state will fall increasingly behind the U.S. average.

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*Except to the extent, if any, that there may have been improvements in resource quality.

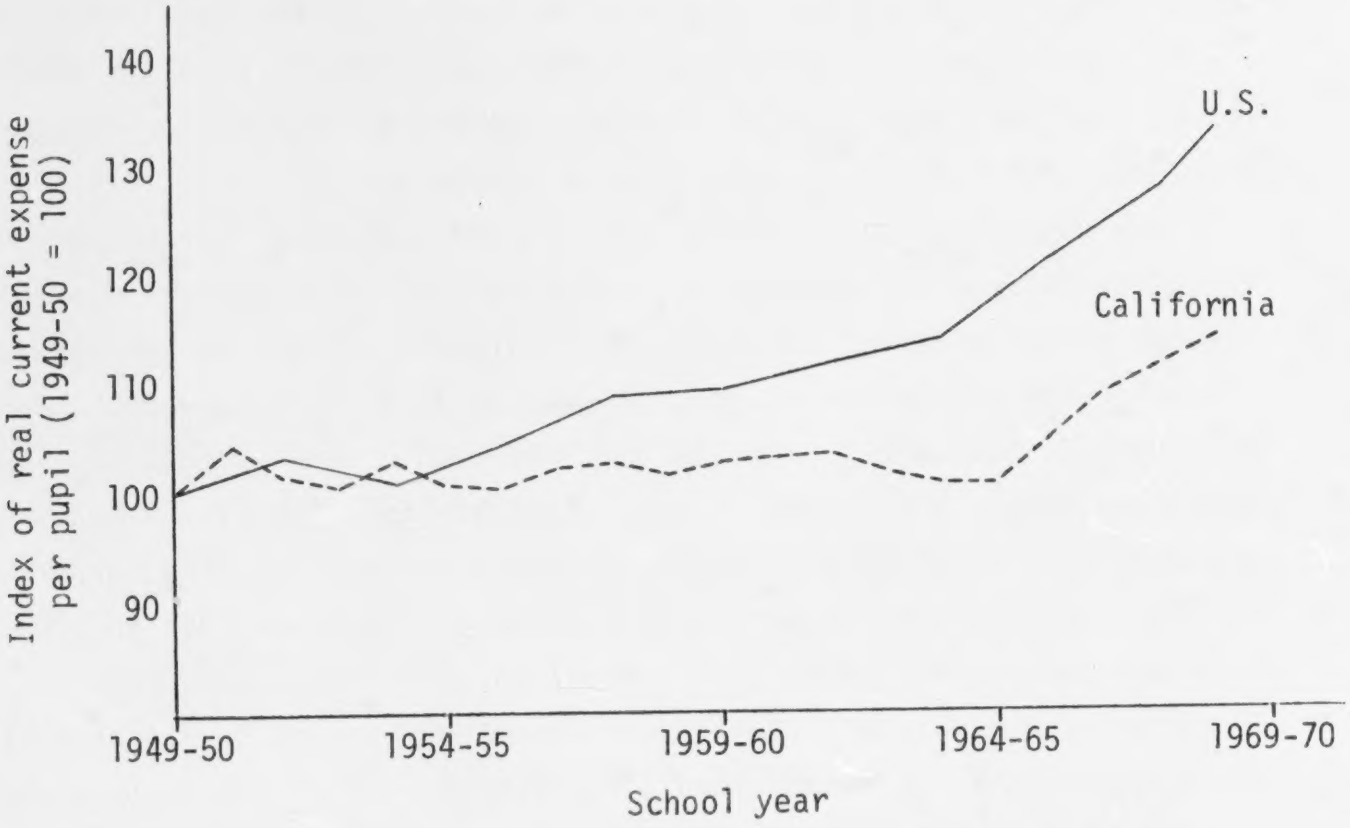

Fig. 5--Trends in real current expense per pupil: California versus total U.S. (U.S. data from *Digest of Educational Statistics, 1969*, U.S. Office of Education, Washington, D.C., 1970)

THE DISTRIBUTION OF PER PUPIL OUTLAYS AMONG DISTRICTS

A prominent feature of the present system--one that is more responsible than anything else for motivating reform proposals over the years--is the unequal distribution of funds (in terms of per pupil amounts) among the school districts of the state. The extent of this inequality is shown in Fig. 6. These are cumulative distribution diagrams showing, for elementary, high school, and unified districts, the percentage of pupils throughout the state whose schooling is supported at or below selected levels of spending.* Figure 6a, for example, shows that while

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*The data are for districts with more than 1000 pupils in average daily attendance only. Smaller districts receive special aid from the state to compensate for indivisibilities and other diseconomies of small-scale operation. They are not financially comparable with larger districts and their inclusion would tend to distort the results. By drawing the line at 1000 ADA, we excluded 34 of 229 unified districts, 42 of 121 high school districts, and 509 of the 732 elementary districts in the state (including 342 elementary districts with 300 or fewer

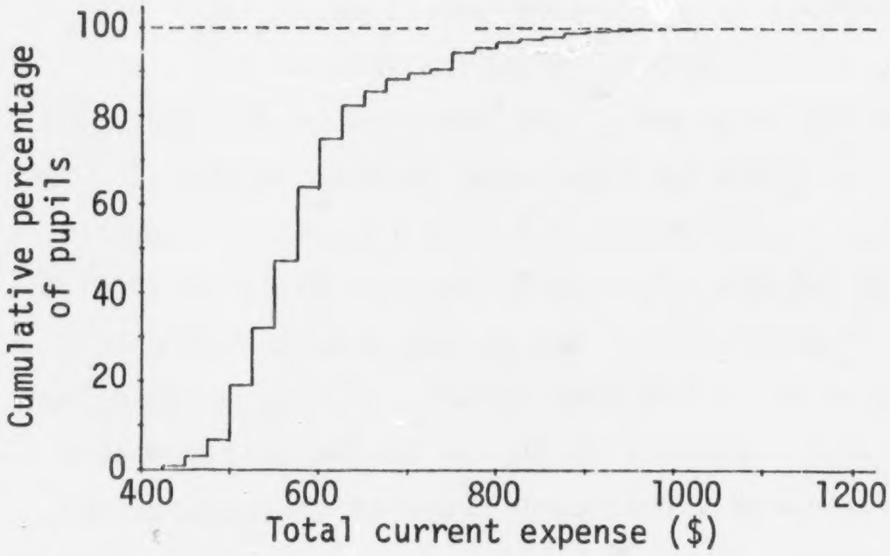
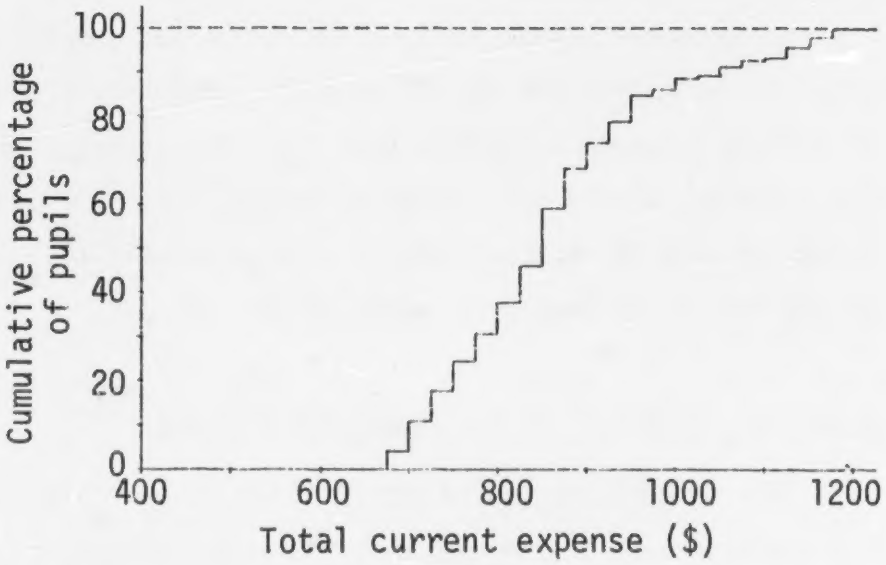


Fig. 6a--Elementary Districts

Fig. 6b--High School Districts



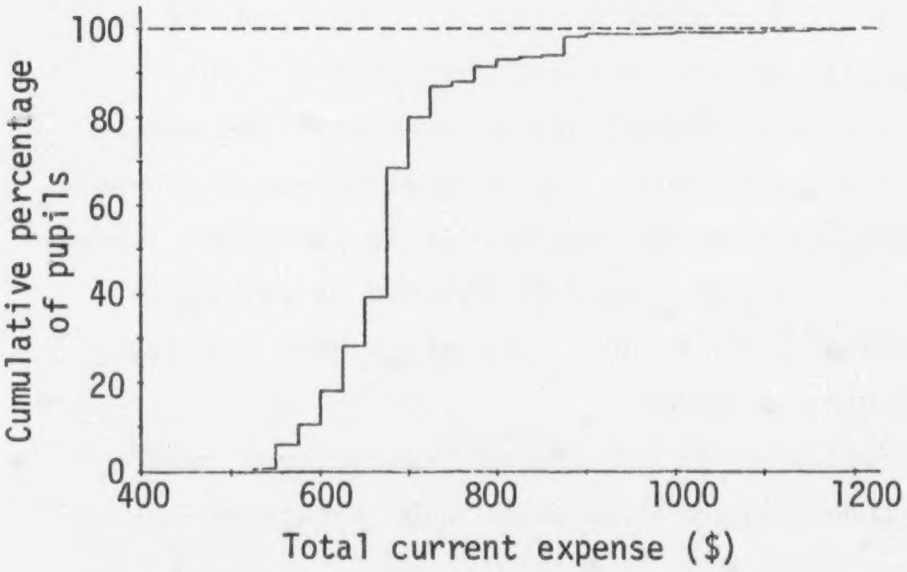


Fig. 6c--Unified Districts

Fig. 6--Cumulative distributions of total current expenses per pupil among pupils in California districts with over 1000 ADA, 1968-69 (computed from data provided by the Research Department of the California Teachers Association) median current expense per pupil in elementary districts in 1968-69 was about $613, 32 percent of all elementary pupils were in districts that spent $550 or less, while 10 percent were enrolled in districts that spent $725 or more. Attention is frequently focused on the extreme disparities that exist in the state, e.g., in Los Angeles County, the $1231 per ADA spent for current expenses in Beverly Hills in 1968-69 compared with only $577 in Baldwin Park. But a more accurate perspective can be obtained by ignoring the extreme cases. If, for example, we neglect the highest and lowest 5 percent of pupils in the distributions in Fig. 6, the remaining variation within each class of district covers a range of about 1.6 to 1; i.e., districts at the upper end of the distribution spend about 60 percent more per pupil than those at the low end. Ninety percent of all pupils attended districts that spent in the following ranges: elementary, $490 to $800; high school, $700 to $1150; and unified districts, $570 to $880. This is still a wide enough range of variation to produce sharp differences in the educational programs of districts at opposite ends of the scale.

Spending in Relation to Educational Need

The distributions shown in Fig. 6 are *prima facie* evidence that California does not provide equal educational opportunities to its children. The *prima facie* finding might be reversed, however, if it were shown that the inequality is systematically related to need. Specifically, if districts with difficult educational problems were found to spend more than other districts, the inequality would probably be considered not only justified but desirable. It is important, therefore, to try to find out how the existing distribution of per pupil outlays in California is related to factors that might have a bearing on the difficulty of educating children.

While there is no agreed upon definition of "educational need"--much less a quantitative index--there does seem to be acceptance since

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pupils. But the excluded units accounted for less than 1 percent of statewide enrollment in unified districts, 5 percent in high school districts, and 12 percent in elementary districts, or less than 4 percent of total enrollment in grades K-12.

the Coleman Report[*] of the idea that social and environmental disadvantagedness is the major factor. Two specific variables that are almost invariably found to be associated with disadvantagedness are minority racial or ethnic background and socioeconomic status. Family income is a good proxy for the latter. Other things being equal, more resources per pupil would presumably be needed to provide a given level of educational attainment where family income is low or the minority percentage is high. Using available data, which are fragmentary, especially for family income, we attempted to compare the two variables with reported per pupil expenditures in the districts.

Spending in Relation to Percentage of Minority Pupils. Data on the percentage of minority students in each unified district are tabulated in a report on California reading test scores in 1968-69. A comparison of those figures with current expenses per pupil in each district yielded the results shown in Table 4. No systematic relationship is evident. Although spending in districts with the highest minority percentages (50 percent or more) is considerably lower than in districts with only 0-5 percent minority enrollment, districts in the 30-40 percent range spend nearly as much as districts with negligible minority population. Also, districts with 10 to 25 percent minority enrollment spend much less than those with 25 percent or more. On the whole, it must be concluded that districts with substantial numbers of minority pupils spend no more and no less, on the average, than districts with few minority pupils.[†]

Spending in Relation to Family Income. Data on family income by school district are not normally available. However, the annual "Survey of Buying Power" by *Sales Management* magazine provides data on "effective buying income" (a concept similar to disposable personal income)

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[*] James S. Coleman, et al., *Equality of Educational Opportunity*, Office of Education, U.S. Department of Health, Education and Welfare, Washington, D.C., 1966.

[†] This, of course, says nothing about the distribution of resources within districts between minority and white pupils. Also, the findings apply only to unified districts with ADA greater than 1000. Smaller districts and separate elementary and high school districts would exhibit different patterns.

Table 4

CURRENT EXPENSE PER PUPIL IN RELATION TO MINORITY ENROLLMENT

Unified Districts with More than 1000 Pupils, 1968-69

Percent Minority Pupils	*Current Expense per Pupil in Median District*	*Number of Districts*
0-5	766	31
5-10	732	35
10-15	692	28
15-20	675	18
20-25	689	19
25-30	726	10
30-35	742	13
35-40	759	10
40-50	716	8
50+	710	16
All districts	717	188

SOURCE: Minority percentage data from *California State Testing Program, 1968-69*, California State Department of Education, Sacramento, 1970. Current expense figures from the California Teachers Association.

for a number of California cities. By associating these income estimates with spending in corresponding school districts, a rough impression of the family income-school outlay relationship can be obtained.* The results of such a comparison, using 1968-69 data on 71 California cities and school districts, are shown in Table 5. They indicate a consistently positive relationship between the two variables. Although the sample is nonrandom and the specific figures should not be taken too seriously, there is clearly no evidence in favor of a positive need-expenditure correlation.

Both the family income and minority percentage comparison confirm the *prima facie* evidence on unequal educational opportunity in different

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*The roughness is due in considerable part to the fact that cities and school districts are usually not coterminous even when they have the same names.

Table 5

CURRENT EXPENSE PER PUPIL IN RELATION TO FAMILY INCOME

Unified Districts with More than 1000 Pupils, 1968-69

Average Family Income	*Current Expense per Pupil in Median District*	*Number of Districts*
Less than $8,000	703	6
$8,000-$8,999	718	23
$9,000-$9,999	732	16
$10,000 or more	737	26

SOURCE: Family income data from *Sales Management Survey of Buying Power*, Vol. 100, No. 12, June 10, 1968. Current expense figures from the California Teachers Association.

California school districts. While a much more refined analysis would be needed to provide an accurate picture of the existing need-expenditure relationship, it is unlikely that the finding of "no positive relationship" would be reversed. Most charitably, it can be concluded that resources are now distributed unequally among districts without regard to educational needs. If anything, as the income data suggest, districts with higher socioeconomic levels (and presumably lesser relative need) enjoy somewhat higher levels of educational support.

Spending in Relation to Local Tax Bases

Much of the variation in spending levels among districts is associated with variations in local property values despite the "equalization" features of the state aid formula. The extent to which the present formula does *not* equalize for differences in local tax bases is shown in Fig. 7. This is a scatter diagram showing how current expenditures per pupil were related to assessed property values per pupil in unified districts in 1968-69. The positive relationship is clear. Districts with higher tax bases tend to spend more.

The positive correlation between property value and spending is a direct consequence of the state's financial provisions, which leave

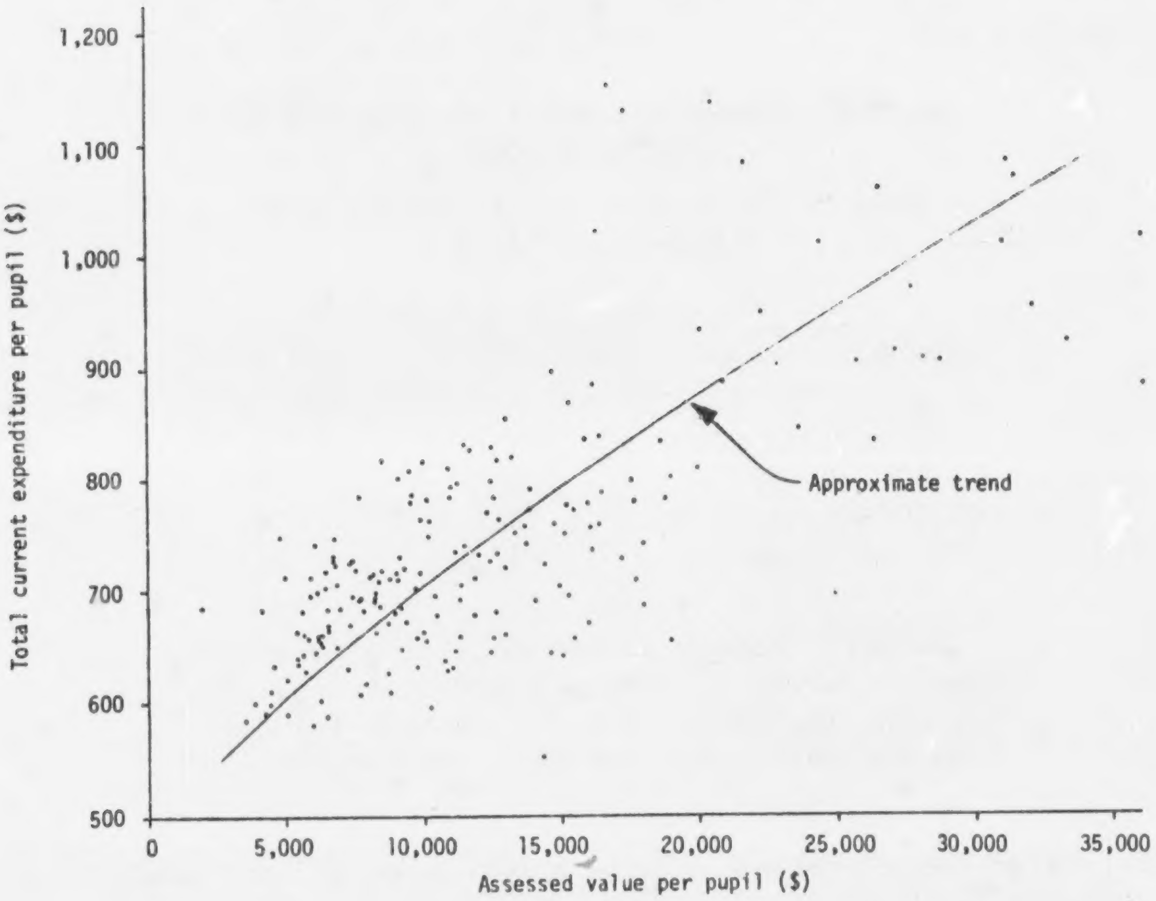

Fig. 7--Expenditure per pupil in relation to assessed value per pupil (California unified districts with over 1000 ADA: 1968-69)

districts to rely entirely on their local tax bases for spending above the foundation level. With such an arrangement, the only thing that could prevent the positive relationship we observe would be a heroic effort by the poorer districts to tax themselves at high enough rates to overcome their tax base deficiencies. But examination of the range of variation in tax bases shows how unlikely it is that districts could successfully compensate for low tax bases by paying higher rates. Figure 8, which shows cumulative distributions of assessed value per pupil for each type of district,[*] demonstrates that the range of variation is very large. Excluding the upper 5 percent and lower 5 percent of pupils, the range of variation is roughly \$5000 to \$25,000 of assessed valuation (AV) per ADA for elementary districts, \$10,000 to \$45,000 for high school districts, and \$5000 to \$20,000 for unified districts--i.e.,

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[*] Data are for districts with more than 1000 ADA only. See footnote, p. 30.

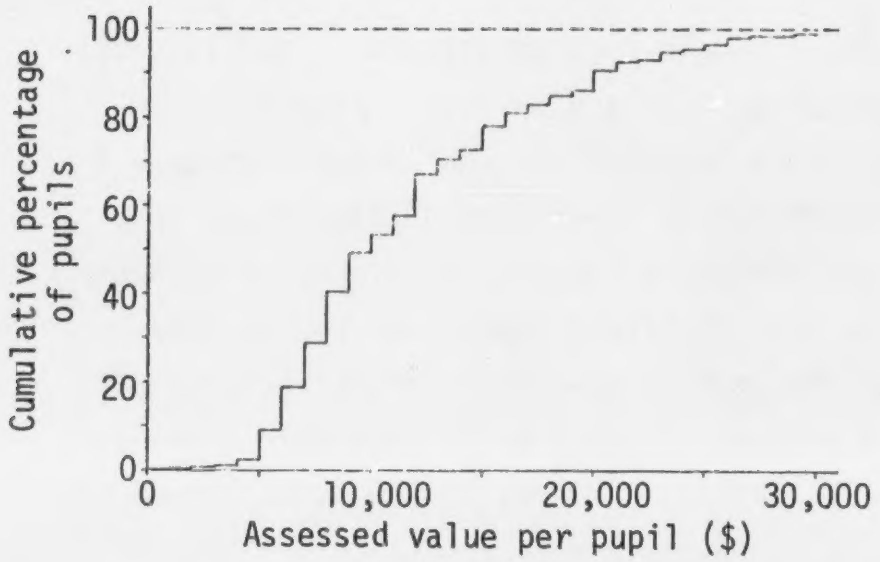
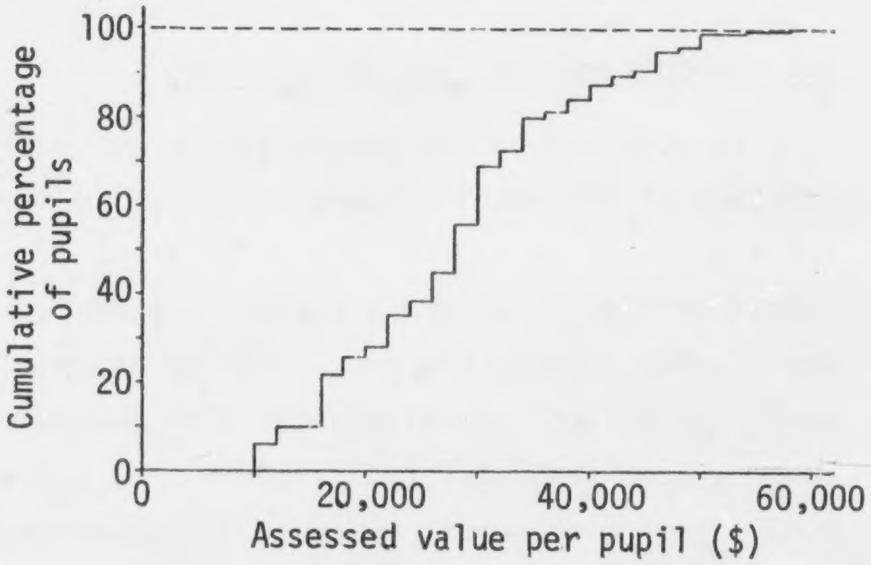


Fig. 8a--Elementary Districts

Fig. 8b--High School Districts



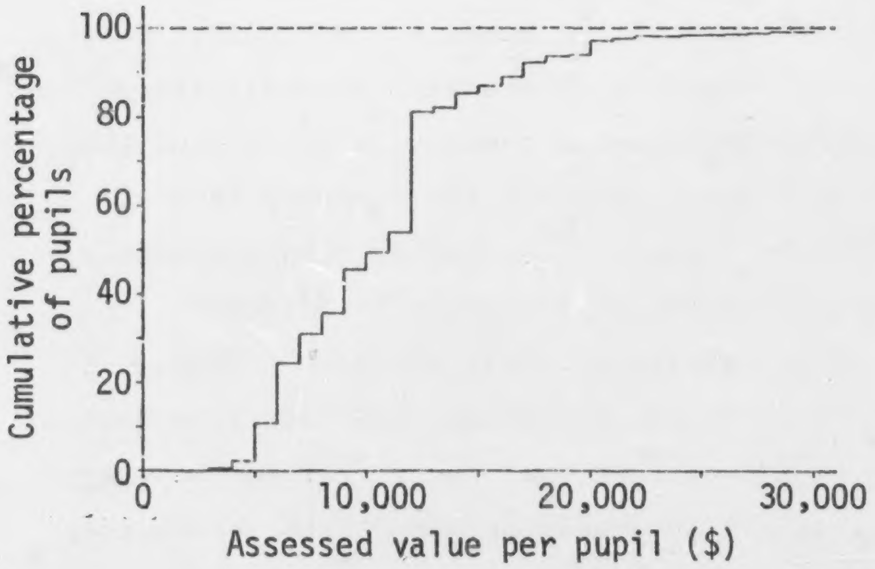


Fig. 8c--Unified Districts

Fig. 8--Cumulative distribution of assessed value per pupil among pupils in California districts with more than 1000 ADA, 1968-69 (computed from data provided by the Research Department of the California Teachers Association) ratios of four or five to one for each type of district. The fact that the ratio of spending variation is only 1.6 to 1 reflects both the workings of existing equalization features and the tendency of many wealthy districts to tax themselves at lower-than-average rates (see below). But to eliminate the remaining expenditure disparity without changes in the state system, poor districts would have to tax themselves at several times the tax rate of wealthier districts to compensate for their low assessed values. This is not a realistic possibility (nor would it be at all equitable). Hence, the positive relationship shown in Fig. 7.

The Expenditure-Tax Rate Relationship

In addition to the inequality in expenditure levels, there are substantial disparities among districts in the rate at which they must tax themselves to support any *given* level of spending. This is illustrated by Fig. 9, in which current expenditures by unified districts are plotted against tax rates. As an example, it can be seen that unified districts spending about $700 per pupil have property tax rates ranging from about 2.7 to 5.2 percent of assessed value--a range of nearly two to one. Or, making a different comparison, it can be seen that a district such as *A* enjoys both a higher level of spending and a lower tax rate than a district such as *B*. Note, in particular, that nearly all the highest spending districts (those with expenditures of $900 or more per ADA) have below-average tax rates. To the extent that tax rate is a valid measure of "fiscal effort," the tendency is actually for effort and support to be negatively, rather than positively related. In effect, the "price" of public education is different in each district. Individual taxpayers in precisely the same economic circumstances, but situated in different districts, can receive school tax bills that differ by up to 100 percent; yet their children may receive educational services that are inversely related to the taxes they pay.

The underlying reason for these disparities in the expenditure-tax relationship is that the existing system provides greater financial opportunities to districts with higher tax bases. Figure 10 illustrates

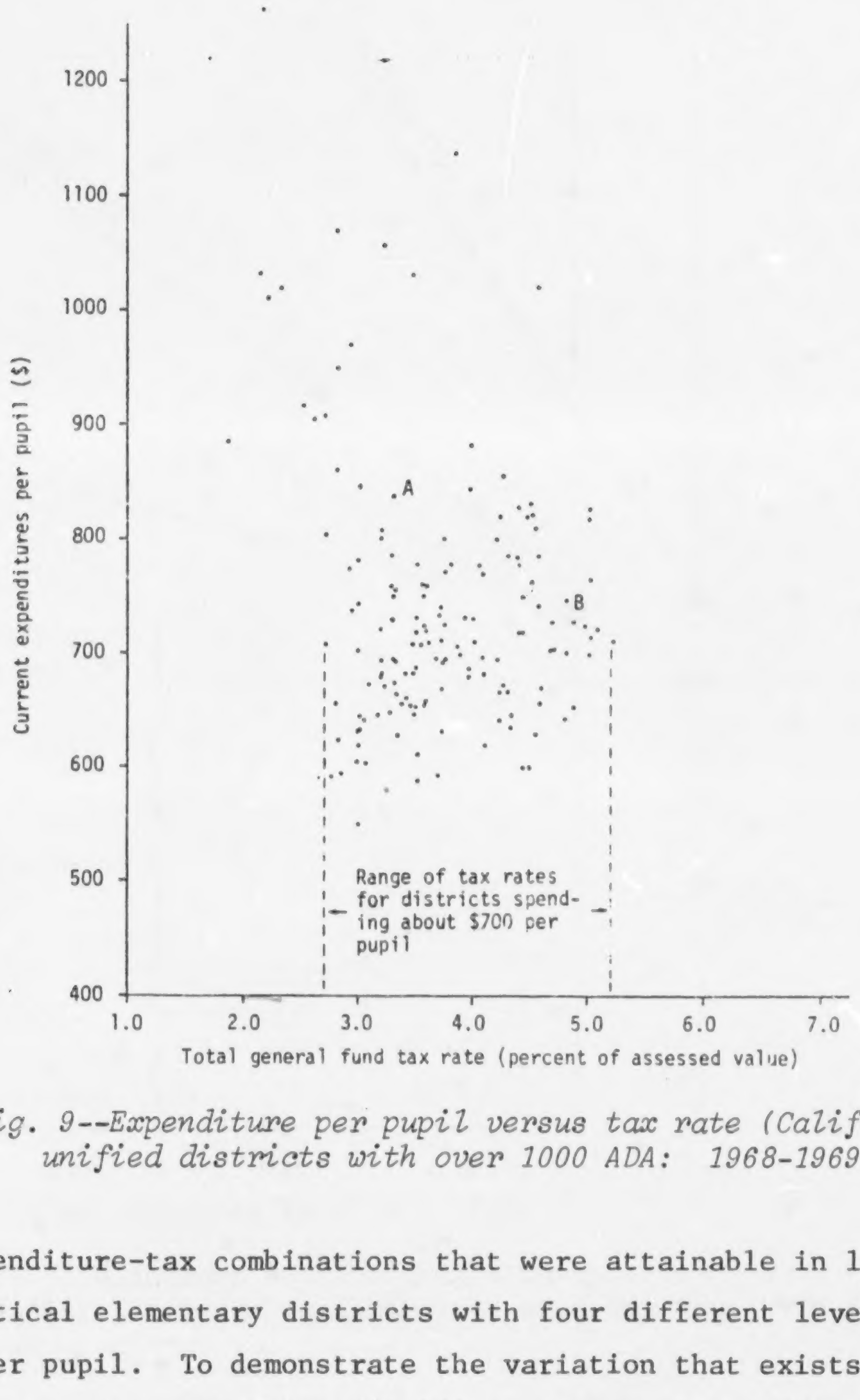


Fig. 9--Expenditure per pupil versus tax rate (California unified districts with over 1000 ADA: 1968-1969)

the expenditure-tax combinations that were attainable in 1968-69 by hypothetical elementary districts with four different levels of assessed value per pupil. To demonstrate the variation that exists, we have selected a very poor district [$5,000 assessed value (AV) per ADA], a district just at the qualifying point for supplementary aid ($10,000), a slightly above-average district ($15,000), and a very wealthy district ($30,000). For the purpose of this comparison, we assume that each district receives $75 per ADA in categorical state and Federal funds in addition to the funds provided under the main state aid formula.

Figure 10 shows the total revenue that each district would have been able to obtain with any chosen tax rate. With a 1.0 percent local

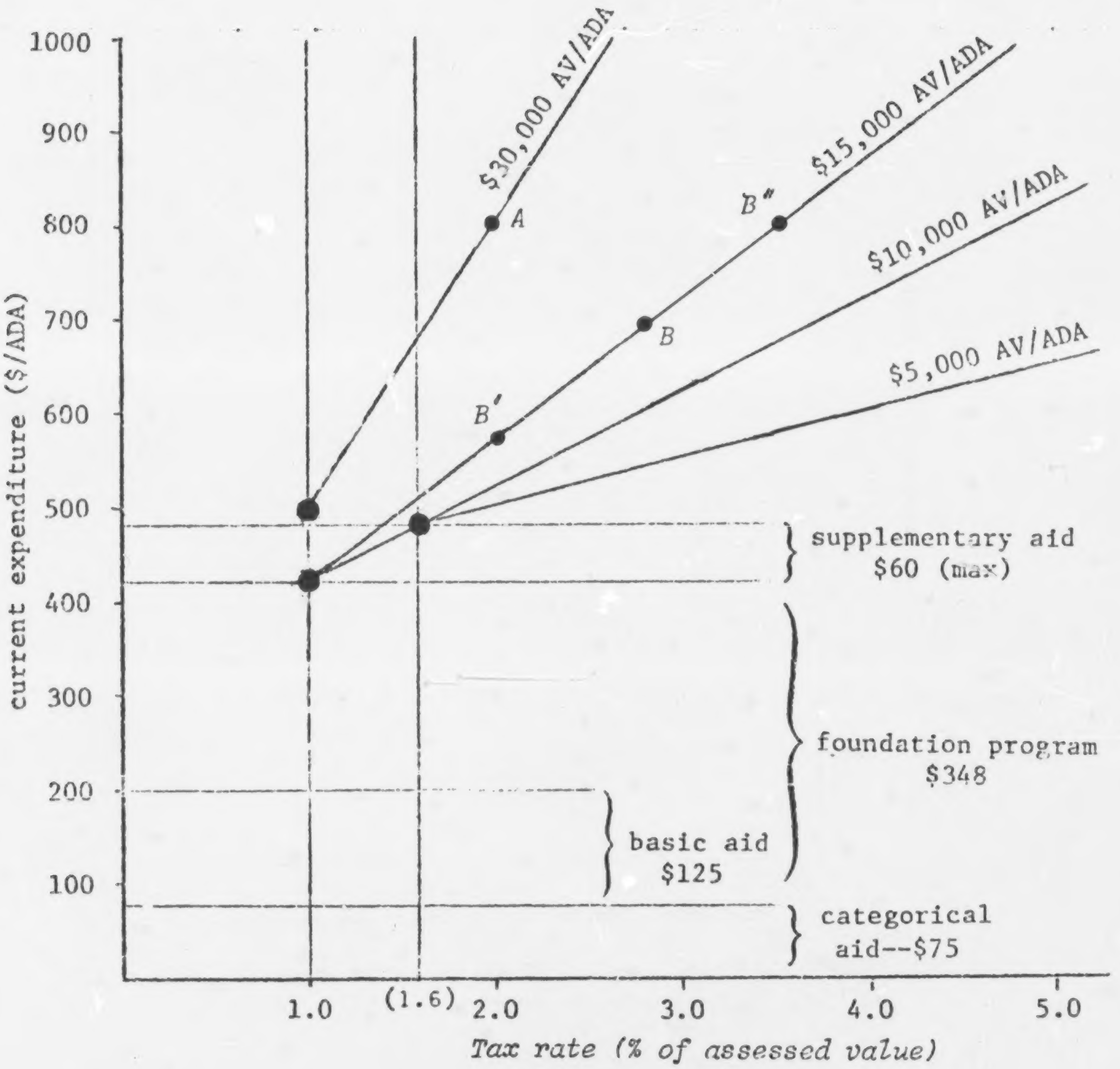


Fig. 10--Expenditure-tax rate combinations available to districts with different tax bases (elementary districts, 1968-69)

rate, the three less wealthy districts would all have received $423 per ADA (the foundation amount plus the $75 of categorical grants).* The wealthy district would already have exceeded that amount; in fact, its basic aid ($125), categorical grants ($75), and the proceeds of the 1.0 percent tax ($300) total $500 per ADA.

At tax rates higher than 1.0 percent, the expenditure opportunities of the four districts diverge rapidly, as can be seen from the much more steeply sloping opportunity lines representing the wealthier districts.* With a 2.0 percent tax, for example, the wealthy district supports an \$800-per-ADA program (point A in the diagram). That same program would require tax rates of 3.5, 4.8, and 7.9 percent, respectively, for the other three districts in order of decreasing tax base. The last two, certainly, are unreasonably high rates compared to the rates actually levied by elementary districts in 1968-69.

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*Assuming that 35 percent of the district's ADA was in grades 1-3, the average foundation level per pupil would have been $348 in 1968-69.

If we compare the opportunities available in 1968-69 to the \$15,000 AV/ADA and \$30,000 AV/ADA districts, we find that the former could have chosen (1) to pay the same low tax rate as the latter and provide a substantially lower program (point B′), or (2) to provide an equal program at a much higher tax rate (point B″), or (3) some combination of the two, such as point B. No matter what choice was made, the poorer district would have either paid a higher tax rate than the richer, provided a less adequate educational program, or both. The same conclusion obviously applies more generally to any comparison of districts with different tax bases.

Determinants of Local Willingness to Support the Schools

Under the existing system there is a strong relationship between district spending and the local property tax base. The higher a district's tax base, the more it can spend per pupil with a given level of effort or sacrifice. Most districts with higher than average assessed value tend to take at least partial advantage of their opportunities, so that the positive correlation is established. Nevertheless, it would be misleading to stress the role of assessed value as a determinant of spending to the exclusion of other factors. As can be seen from Fig. 7, superimposed on the positive trend is a considerable degree of variation in spending by districts at any *given* tax base. The factor of *willingness* to tax for education must also be considered; and that varies among districts according to a variety of economic, demographic, and social factors that have little to do with property values.

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*Note that the opportunities of the \$5,000 and \$10,000 AV/ADA coincide up to a tax rate of 1.6 percent because of the supplementary aid received by the \$5,000 AV district.

A full analysis of the determinants of local expenditure behavior cannot be offered here. There is a large body of theoretical and empirical literature on the problem,* some aspects of which have not yet been resolved satisfactorily. Without entering into a technical analysis, however, it is possible to identify some of the major expenditure determinants and to characterize their effects. The result of this exercise is to modify somewhat the impression one gets from emphasizing the role of the tax base. It becomes apparent that expenditure inequality would still exist even if assessed values per pupil were the same in all districts. It becomes clear, also, that a number of factors other than the tax base need to be taken into account in designing improved, more equitable allocation formulas.

Personal Income. There has been so much emphasis on property value as the measure of "ability to pay" that one can easily forget that taxes are paid out of income no matter how they are levied. To the extent that local property taxes are paid by individual taxpayers rather than businesses (i.e., roughly to the extent that they fall on residential property), the link to incomes is direct. If homes in two districts have the same average value, but family income is higher in one district than another, then (assuming other things equal), we would generally expect the higher income district to spend more for its schools even though that would require a higher tax rate. The rate of tax on income is a more fundamental measure of "effort" than the rate on property. The two measures are not always in agreement because the relationship between property value and personal income is not constant among districts.

The Pupil/Population Ratio. The ratio of pupil enrollment to total population of a district determines the tax that must be paid per capita

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*See James A. Wilde, "The Expenditure Effects of Grant-in-Aid Programs," *National Tax Journal*, Vol. 21, September 1968, pp. 340-348, which has references to most of the recent literature; also H. Thomas James, J. Alan Thomas, and Walter Garms, *Determinants of Educational Expenditures in the United States*, School of Education, Stanford University, Palo Alto, California, 1966 and Jerry Miner, *Social and Economic Factors in Spending for Public Education*, Syracuse University Press, Syracuse, New York, 1963.

to support a given level of per pupil spending. If district A has one out of every four people in school while district B has only one out of every six people in school, then A must tax itself 50 percent more per capita than B to provide the same per pupil revenue. In general, the lower the ratio of pupils to population, the lighter the burden of a given level of per pupil support. Therefore, other things being equal, we would expect districts with large fractions of their populations in school to spend less per pupil.

The Composition of the Tax Base. Districts vary greatly in the proportion of the tax base that consists of industrial and commercial, as opposed to residential, property. It is primarily taxes on the latter that constitute a "burden" to the local voter. Suppose that one district has only residential property while another has half residential and half industrial or commercial property. In the first district, every extra dollar for the schools must be obtained from the local homeowners. In the second district, only 50 cents of each dollar must be obtained from the homeowner. Clearly, higher school taxes would seem a more attractive proposition to homeowner/voters in the second district. More generally (again, assuming other things equal), we would expect greater willingness to tax for education, the higher the percentage of nonresidential assessed property.

Noneducational Property Taxes. It is a fact of life that education must compete with other public services as well as with private goods for the taxpayer's dollar. Where municipal and county property taxes are already high, the voters are likely to be reluctant to approve high levies for the schools. This problem is so characteristic of the big cities that the term "municipal overburden" has been coined to describe it. In the absence of compensatory provisions, the effect is to hold down school spending in urban areas despite both the unquestioned educational need and the apparent adequacy of the tax base.

Intangible Factors. After all the readily quantifiable factors are accounted for there is still residual variation in spending attributable to other unmeasured differences in local circumstances and to interdistrict variations in "tastes" and "attitudes" concerning education. Efforts have been made to "explain" the latter in terms of observable demographic, political, and social characteristics of communities; but these have generally not been successful. For our present purpose, it is sufficient to note that after the objective circumstances have been accounted for there are still differences in local willingness to spend. The question of how much freedom local districts should be afforded to act on these preferences is one of the more difficult value questions in school finance. It is taken up again in the discussion of distribution in Sec. V.

Summary

This review of resource allocation under the existing system has examined overall levels of support, the distribution of educational resources among districts, and the workings of the distributional mechanism.

The principal finding concerning overall support is that the quantity of resources per pupil in California, especially in terms of professional manpower, is lower than most other states; also that real support per pupil (not adjusted for quality) has grown more slowly than in the rest of the country. On the other hand, the combination of high costs of education and a large fraction of the population in school makes it necessary for Californians to pay higher than average taxes to support a below-average program. That makes the choice of the level of support especially difficult.

Principal findings concerning the distribution of resources among districts can be summed up as follows: (1) There is substantial inequality in spending among districts; (2) whatever relationship exists between resources and educational need is in the wrong direction--fewer resources where the need is greatest, more resources where the need is least; and (3) in addition to inequality in spending, there are large disparities in the tax rates districts must levy to support any given level of per pupil outlay.

Inequities in distribution are directly traceable to features of the existing local property tax-state aid system. With the present state aid formula, districts with high tax bases enjoy the opportunity to spend more per pupil without making a greater, or even as great, an effort as districts with low tax bases. The result is a strong positive relationship between assessed property value and per pupil spending. In addition, the present formula fails to allow for a number of other economic and demographic factors that influence local willingness to spend and thereby contribute to inequality in school support.

IV. HOW MUCH SHOULD BE SPENT ON THE PUBLIC SCHOOLS?

In the Introduction, three questions were identified that summarize the major policy controversies in school finance: (1) How much should be spent on the schools? (2) How should resources be allocated among districts or pupils? (3) How should the burden of school support be distributed among taxpayers? These issues are discussed and alternative solutions presented in this and the following two sections.

Relatively little can be said about the question, "How much should be spent?" Fundamental values are at stake. Ultimately, the choice depends on the priorities that Californians assign to education relative to the other goods that public or private money can buy. As long as we have public schools that decision will be made through the political process, either in a semi-decentralized manner, as at present, or more directly by the state. A search for an objective, scientific determination of the "correct" level of spending is bound to be unfruitful. But an effort to delineate the main considerations that should enter into the decision may be of value.

IMPLICATIONS OF THE FINDINGS ON RELATIVE LEVELS OF SUPPORT

Data comparing current California school support with support elsewhere in the country and in California in the past were presented in Sec. III. The findings from those comparisons were that California support is low when measured in terms of staff/pupil ratios and that it has grown very slightly over the years. This creates at least a presumption that California is not educating its children as well as other states that are comparable in terms of wealth. While that presumption cannot be confirmed without a thorough interstate comparison of results, taking many other factors into account, it is supported by the consistently below average scores of California children on nationally-normed reading tests. No one has mandated that California schools must measure up to national standards. Yet, the role of the state as a leader in modern, high-technology industry and its preeminence in public higher education make a lesser goal seem inconsistent and self-defeating. The issue of the priority to be accorded public education has been pushed aside by the urgent, short-run problems of coping with growth and rising costs. But if more comprehensive school finance reform is now to be considered, explicit goal setting in this area seems to be one of the logically necessary, early steps.

Probably one of the major reasons that California does not spend more on its schools is that residents of the state must shoulder a larger burden than residents of most other states to provide a given level of per pupil resources. Two mutually reinforcing factors were noted as being responsible. One is that California has a larger proportion of its population in public school than most other states--26.1 percent in 1968-69. Each taxpayer, therefore, must assume the cost of educating more children than would be the case where the ratio is lower. The other factor is the high level of instructional salaries. Comparing across states, the only other state in the continental U.S. with equally high salaries is New York; but there the proportion of the population in school is lower, which tends to lower the price of schooling to the taxpayer. On the other hand, a number of states have as many pupils enrolled, relative to population, as California, but they pay considerably lower salaries. It is the combination of the two factors that places California at a disadvantage. This circumstance cannot help but have a dampening affect on legislators' and voters' enthusiasm for supporting the schools.

When the various cost factors are taken into account, it becomes clear that today's low levels of real support cannot be attributed simply to lack of appreciation of the value of schooling. The fact is, California faces a less favorable rate of exchange than most other states between per pupil resources and the per capita economic sacrifice needed to obtain them. Thus far, the choice has been to sacrifice a slightly above average percentage of income for schooling. But in California, this buys lower-than-average quantities of per pupil resources. The question, now, as discontent with the schools increases, is whether the state should shift toward a new balance more onerous to the taxpayer but more favorable to education.

Two specific factors should influence the aggregate spending decision. One is the ability of the state to "afford" higher per pupil outlays. This ability is likely to increase in the future because of the projected tapering off of public school enrollment. The second is the relationship between school spending and educational results, which must be assessed to determine what benefits, if any, are likely to be derived from an increase in spending. These two factors are discussed immediately below.

IMPLICATIONS OF THE LEVELING-OFF OF ENROLLMENT

A development that should have important implications for school finance is that, at least for the time being, public school enrollment is ceasing to grow. The rate of enrollment increase from 1968-69 to 1969-70 was down to 2 percent from the 5 to 6 percent rates characteristic of most of the post-war period. With elementary enrollment already constant and likely to decline, the outlook is for overall growth to approach zero. This presents the state with a unique opportunity to raise real per pupil support with no acceleration of the historical rate of increase in the school revenue burden.

The impact of growth on past levels of support is suggested by the fact that real disposable income *per pupil* in the state was actually lower in the mid-1960's than a decade earlier. It was necessary to increase the proportion of income going into education merely to compensate for increases in the relative costs of school resources. In addition, massive capital outlays were needed to provide facilities for the growing school population. It is not surprising that additional resources were not provided to support higher program levels.

With enrollment constant, it is possible that the annual rise in real income per pupil (assuming recovery of the general economy) will be sufficient to more than compensate for future increases in educational costs. That is, a constant fraction of income devoted to school taxes may be enough to maintain program levels. Some resources will also be freed as a result of the diminished need for school construction. If, in addition, there is some further increase in the fraction of the state's income allocated to public education, total funds should be adequate to finance substantial program improvements. Another positive factor--also a consequence of the leveling-off of enrollments--is that the market for instructional personnel is likely to be more favorable for school districts. With an actual surplus of teachers, pressures for relative salary increases (i.e., increases over and above the rise in the general cost of living) are likely to be weaker. At a minimum, qualitative upgrading of school staffs should be possible.

Decisions by state policymakers will determine whether, and to what extent, use is made of the opportunity to increase school support. There are rival claimants for the resources that will be freed. Other state-local programs, such as welfare, will probably not experience the same lessening of pressure and could easily absorb available funds. Local property tax relief is also a likely candidate that, in fact, has received even more attention than education in recent years. Once again, the question is, "How highly is education valued relative to other things?" The key may be to convince state policymakers that real benefits will flow from a new infusion of funds. That case is yet to be made. Unless it can be made effectively, "holding actions" in school finance are likely to remain the rule despite the opportunity that is at hand.

THE RELATIONSHIP BETWEEN FINANCIAL INPUTS AND EDUCATIONAL OUTCOMES

Perhaps the greatest impediment to intelligent decisionmaking about the level of school spending is that so little is known about the relationship between resource inputs and educational output. If we had adequate information, choices about the level of spending would be clear-cut. We would know how much learning could be expected from each student when different amounts of money were applied to education in a well-managed district. We would also know the added return to be expected from each increment of dollars. The problem facing the politicians would be to determine the cut-off point. When would an additional increment in performance no longer be worth the added financial sacrifice?

Without that information, we must reason in terms of inputs, with only the vaguest idea of what additional inputs will buy. Either we base our decisions on comparisons with other times and places; or we speculate about "adequate," "necessary," or "desirable" levels of support; or--most frequently--we operate as incrementalists, providing the funds needed to maintain existing resource levels and, occasionally, to support "program improvements." Faced with specific problems, such as the need to determine the resources needed to compensate disadvantaged children for environmental deficiencies, we must rely on intuition because we lack knowledge of how much additional money "makes a difference." These will remain the possibilities until our knowledge of the educational process is improved.

Systematic research on input-output relationships, or the "production process," in education is a relatively new phenomenon. Although many earlier studies dealt with aspects of that relationship, this work, in its contemporary form, dates from the Equal Opportunity Survey (The Coleman Report) of 1966.[*] Studies using Coleman's data and similar studies based on other sources[†] have produced a number of widely publicized, but largely negative, findings: The effects of family and home environment and pupils' socioeconomic status appear to outweigh the effects of school variables as determinants of outcomes. Items that school districts spend heavily on, such as more experienced, better trained teachers and smaller class sizes, seem to be of little value. Items that *do* seem to have an effect are not readily controllable, e.g., teachers' verbal ability and teacher and pupil attitudes. The effect of more money is uncertain, as are the uses to which it should be put if available. Very few findings, thus far, translate into specific, constructive guidance for policymakers. There is very little evidence to support the view that more money will have a positive effect on learning.

This research is in its infancy and the paucity of policy-relevant findings at this stage does not mean there will be no payoff in the future. However, it does appear that extensive experimentation, rather than more statistical surveys alone, will be needed to find out how resources can be used effectively in the schools. California, along with a few other states, has moved to support work in this direction by extending requirements for program evaluation and by planning a program of experimental schools. But considerably more will have to be done to produce answers to the basic educational issues that impinge on school finance decisions. It has often been pointed out that education, of all major American industries, spends proportionately the least on research. The effect has been to handicap education itself, as well as the financial decisionmakers. The prospects for better decisions in the future on the matter of resource allocation in the schools depend on what we do to expand the current base of knowledge.

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[*] Op. cit.

[†] A compendium of these studies, with references to virtually all the literature, is available in *Do Teachers Make a Difference?*, U.S. Department of Health, Education and Welfare, Office of Education, Washington, D.C., 1970.

THE AGGREGATIVE IMPLICATIONS OF REDISTRIBUTION

A final point concerns the relationships between the distributional issues discussed earlier and decisions concerning aggregate support. In principle, the two can be dealt with separately. That is, one can devise a distributional policy that applies regardless of the absolute level of support and, conversely, one can determine the desirability of greater or lesser average spending without considering distribution. In practice, the two are likely to be closely linked by virtue of political reality.

In principle, redistribution could be managed by providing more money to the present low-spending districts, reducing the spending ability of the present high expenditure districts, or both. Depending on what mix were selected, aggregate spending could increase, decrease, or stay the same. Realistically, however, large-scale redistribution probably has to be managed so that expenditures in the poorer districts are brought up while the wealthier districts maintain roughly constant levels of (real) support. Options that would overtly reduce support, such as elimination of basic aid or expropriation of "excess" local revenues, seem unlikely to be enacted. Equalization of tax burdens, via a statewide property tax or by other means, would probably be resisted unless accompanied by overall property tax reduction or offset by a substantial increase in total state aid. Measures that would reduce program levels in a few of the wealthiest districts might be feasible, but a more general redistribution without increased aggregate support seems out of the question. The more palatable measures seem to call for increased state support. In sum, apart from the merits of an expenditure increase in terms of increased output, major increases in state support may be needed simply to lubricate the redistribution process. Increased state taxes appear to be the price of increased educational equity.

V. HOW SHOULD RESOURCES BE DISTRIBUTED AMONG SCHOOL DISTRICTS?

Resource distribution is *the* classic issue in California school finance. During each budget cycle, it comes to the fore as the legislature and the state administration struggle to produce the annual aid apportionment formula. Typically, the debate results in an across-the-board increase in aid. Typically, also, there are changes--sometimes deliberate, sometimes inadvertent--in distributional patterns. For at least 20 years, these changes have taken place within the framework of the existing foundation program-property tax system. Consequently, although the degree of distributional inequity has changed from time to time, the basic problems, which are inherent in that system, remain unresolved.

The progress of distributional reform is impeded by the habit of viewing the allocation problem narrowly, as one of apportioning a given amount of state funds. Much energy is consumed in controversy over each district's "proper share." A point often lost sight of is that the adequacy of a district's educational resources does not depend on the amount of state funds or local funds, as such, but on total available revenue. Taking a sufficiently broad view, state aid is both a component of school support and--at least as important--a *means* of affecting total per pupil expenditure in each district. The distribution of state funds has no great significance in itself. The more relevant question is, "How can state aid together with other state provisions for school finance be used as a tool in bringing about a desirable distribution of *total* educational resources?"

From the premise that the distribution of total resources is what counts, it follows that state policy alternatives must be analyzed at two levels. First, there is the criterion problem: What is the proper pattern of resource distribution among districts? Second, there is the problem of means: How must the aid formulas be written and how must the system be structured so that the desired distributional pattern is obtained? Only the latter, strictly speaking, is a technical problem amenable to analysis. The criterion question is obviously one that must be resolved politically. Fortunately, however, only a small number of distinctly different distributional philosophies have been developed in the literature, which makes it feasible to examine each of them and trace their implications.

A universal theme in discussions of criteria for school support is "equal educational opportunity." There is wide agreement that it should be a guiding principle in establishing distributional policy. But "equal opportunity" can be defined in a wide variety of ways. Our strategy for the discussion of resource distribution will be to use "equal opportunity" as a starting point, to explicate the distribution policies implicit in alternative definitions, and then to show how each policy leads to specific aid allocation formulas and other specific provisions for school support.

The discussion of alternatives in this section consists of an examination of distributional criteria followed by a review of specific measures for improving distributional results. The latter is organized into three parts, concerned, respectively, with reform within the framework of the foundation aid system, changes that require new aid formulas, and a shift to full state financing. Later, in Sec. VII, specific sets of proposals for fund allocation are brought together with complementary proposals for raising revenue to form a series of cohesive reform programs.

THE CRITERION PROBLEM: DISTRIBUTIONAL IMPLICATIONS OF EQUAL OPPORTUNITY

Alternative definitions of "equal educational opportunity" differ in two respects: (1) the measure of educational opportunity to be "equalized," and (2) the extent to which "equality" is to be attained or guaranteed. By combining different measures of opportunity and different concepts of the proper bounds of equalization, a number of distinct distributional criteria, or policies, can be obtained.

Alternative Measures of Opportunity

There are three kinds of measures that can be considered as a basis for distribution: dollars, resources, and outcomes. For a long time, the major concern was *dollars*. The foundation program aid formula, as used in California and many other states, was designed to limit dollar inequality by placing a lower bound on the level of per pupil spending in each district. There is no conceptual problem in defining what is meant by an equal distribution of dollars. All that is needed to verify equality is proper accounting. Programs can be designed to bring about any desired degree of dollar equalization up to and including full equality by means of direct financing by the state.

The requirements for *resource equalization* are more subtle. As used here, the term "resources" means the value of all human and nonhuman inputs into education--services of teachers, administrators, and support staff; materials and supplies; services of facilities; and so forth. For resources to be fully equalized, each district would have to be given enough money to purchase the same mix, or "package," of resources per pupil. The problem is that equal dollars do not buy equal resources everywhere. For a variety of reasons, districts vary both in ease of access to resources and in the prices they must pay for resources of given quality. For example, a district with especially pleasant surroundings, a desirable location, or a low local cost of living generally does not have to pay as much as other districts to attract teachers of a given caliber. Therefore, since input costs are variable, districts cannot be said to be providing equal programs or equal educational opportunity when their levels of spending are the same. Resource equalization requires that dollars be allocated *unequally* to compensate for interdistrict variations in cost. This means that cost levels in each district must be measured in such a way that the necessary adjustments can be computed.

An allocative criterion based on *educational outcomes* is a relatively new idea. It can be considered a by-product of studies, such as the Coleman Report,[*] showing the importance of nonschool factors, including home environment and socioeconomic status, in determining educational results. From those studies it is clear that even if resources were distributed with perfect equality and all school systems were equally well managed, there would still be wide disparities in outcomes among districts because of differences in their pupil populations.

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[*] Op. cit.

To bring achievement in all districts up to an agreed-upon standard, it would be necessary to allocate resources so as to compensate for differences in the difficulty of educating diverse pupil populations. Stated differently, it would be necessary to allocate resources in proportion to "educational need," where "need" refers to the amount of resources per pupil, relative to the amount required in an "average" district, to produce a given level of educational attainment. Both relative need and relative cost would have to be considered in distributing funds to districts.

The extent to which outcome equalization is feasible has not yet been established. Certainly, it depends on how broadly "outcomes" are defined. Equalization of pupil performance across the full spectrum of educational outputs (in terms of districtwide averages, not results for individual pupils) is probably not feasible because out-of-school influences are strong and the powers of the schools are limited. Most proponents of outcome-equalization aim for a more limited goal: attainment of adequate performance levels in basic skills in all districts. That is more likely to be feasible, although the amount of compensatory resources it would require is unknown. The main operational difficulty in determining proper allocation, analogous to the difficulty in adjusting for differences in cost, would be in quantifying each district's educational need. The basic knowledge of input-output relationships in education that would make it possible to establish need factors scientifically does not yet exist. Nevertheless, some initial steps can be taken. A number of possibilities are discussed later in this section.

Alternative Equalization Policies

Contrary to common usage, the term "equalization," as used in school finance discussions, does not necessarily mean attainment of literal equality in all districts. Instead, it may denote a partial--and sometimes quite limited--shift in that direction. Because of that semantic peculiarity, it is meaningful to speak of different degrees of equalization as possible criteria for state policy in school finance.

Three different equalization principles can be distilled out of the literature on school finance or inferred from existing or proposed state aid formulas. For brevity, we label these the "minimum adequate support," "equal support for equal effort," and "full equalization" policies, respectively.

Minimum Adequate Support. *The state's role should be to equalize opportunity to the extent that each district is assured enough support to provide a "minimum adequate" education to its pupils. Support in excess of that amount should be at local discretion and to the extent that the district is able and willing to pay.*

As was noted earlier, this is the policy that theoretically underlies the foundation program portion of the existing California system. It emerges quite clearly in these excerpts from the statement of legislative intent that prefaces the state aid provisions of the *Education Code*:*

> The system of public school support should assure that state, local, and other funds are adequate for the support of a realistic foundation program. It is unrealistic and unfair to the less wealthy districts to provide for only a part of the financing necessary for an adequate educational program.
>
> . . . . . .
>
> The system of public school support should provide, through the foundation program, for essential educational opportunities for all who attend the public schools. Provision should be made in the foundation program for adequate financing of all educational services.

In order to make this policy operational, the state must define what is meant by an "adequate educational program" or "essential educational opportunities." As noted by the California Legislative Analyst, the present definition is "so vague as to be almost meaningless," and the actual foundation amount written into the legislature's annual school aid bill tends to be based more on available revenues than on educational considerations.† It is clear that the present foundation

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**Education Code* (1967), Sec. 17300.

†*Analysis of the Budget Bill*, op. cit., p. 194.

amounts are not high enough to provide an adequate program by current California standards. They provide barely enough money, for example, to employ teachers, leaving nothing for other expense items. Thus, it can be concluded that the stated intent of the law is not carried out in the law's detailed provisions. But that does not solve the general problem: How should the minimum adequate amount be determined if this distribution policy is to be implemented? Three possible approaches, the first two reflecting a policy of dollar or resource equalization, the third compatible with outcome equalization, are as follows:

1. The foundation amount would be derived by summing specific cost elements that go into making up a "model" program. That is, the average cost (statewide or in a specific area) of providing instruction with a specified standard class size, specfied (average) teacher salary, specified materials, supporting services, administrative staffing, etc., would be determined. These specifications could be varied, as desired, to reflect differentiated model programs for different categories of children. For example, an added amount representing extra resources for compensatory education could be allowed for each disadvantaged child. Cost differences could be taken into account in translating the model program into dollars for each district. This is the approach recommended by the Legislative Analyst.[*] However, it does have two important shortcomings: First, all the specifications of the model programs (e.g., "standard" class size) would be essentially arbitrary. Second, if aid allocations were set in this way, there might be attempts to control or direct local resource allocation along the lines of the model program. For example, districts could be penalized for exceeding the specified class sizes or administrator/teacher ratios. This would increase the rigidity of a system that is already in need of greater flexibility for local adaptation and innovation. In fact, very much this kind of control

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[*] *Analysis of the Budget Bill,* op. cit., p. 195.

and penalty mechanism seems to be part of the Legislative Analyst's recommendation.*

2. The foundation amount could be defined *relative* to the actual level of per pupil spending in the state. For example, it could be set at, say, 90 percent of the average level of school support in California during the preceding year. The amount could either be made self-adjusting from year to year or simply held constant, in terms of real purchasing power, by making annual cost index adjustments. The result of making the definition relative and self-adjusting would be to set an explicit limit on resource inequality. No district could have less than 90 percent of the average level of resources. A possible drawback is that local decisions to finance additional resources out of local taxes would automatically raise the foundation level for the following year, thereby generating uncontrolled increases in state aid. But that could be prevented by appropriate revenue or tax controls. The problem with the cost adjustment approach is that it remains essentially arbitrary, implying acceptance of the base-year level of spending as "correct." But some arbitrariness probably cannot be avoided with any method that is currently feasible. Approaches (1) and (2) both have the merits of (a) reducing inequality, (b) carrying out the philosophy of the foundation program, and (c) not imposing any restrictions, explicit or implicit, on internal resource allocation.
3. In principle, the foundation amount could be set by defining a minimum acceptable level of *educational attainment* and determining the resources, then the funds, that would be required to achieve it in a well-managed district with a given pupil population. This would provide a suitable framework for taking account of differences in educational need among districts, and factors for other than "typical" populations would have to be developed. Cost differentials could also be allowed for in

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*Ibid.

converting resources to dollars. The difficulty, of course, is that current knowledge of input-output relationships in education is so fragmentary that we have no reliable way to determine the resources needed for given results. If we did have that kind of information, the whole process of resource allocation in education might be rationalized and transformed. At the present time, the closest feasible approximation is to use the "model program" approach, basing support specifications on actual, successful programs wherever possible, and differentiating support levels by type of pupil on the combined basis of past experience and judgment. The research needed to allow a direct translation of educational goals into resource requirements remains to be done. A true output-based rationale for funding is not a present reality, but only a possibility for the future.

But, however the minimum adequate level of support is calculated, it is certain to be higher than present foundation program levels. Therefore, a distribution policy based on the minimum adequate support criterion implies either an increase in state-provided or state-mandated funding, or redistribution of funds from high-spending to low-spending districts, or some combination of the two.

Equal Support for Equal Effort. *In addition to guaranteeing minimum adequate support, the state should also equalize financial opportunities by establishing a uniform relationship, applicable to all districts, between local fiscal effort and the level of per pupil support.*

This policy rejects the notion that the state's role should be limited to assuring districts equal access to a minimal educational program. It says that districts should also have access on equal terms to program levels above the minimum. The actual program provided by a district would depend on the district's willingness to tax itself, but the system would be so designed that no district would be at an advantage or disadvantage in making that choice because of a higher-than-average or lower-than-average tax base. The possibility of one district having both a lower tax rate and higher per pupil expenditure than another, as frequently occurs now, would be eliminated.

An "equal support for equal effort" criterion is fully consistent with a state guarantee of minimum adequate funding. The added element is that districts would no longer be left on their own to raise funds in excess of the stipulated foundation amount. Rather, the state would share with the district in financing a better-than-minimum program. Formulas can be written in such a way that each increment in local "effort" (see definitions below) brings in the same dollar or resource increment in every district regardless of the local tax base or the residents' personal wealth. With such a plan in effect, the only cause of expenditure variation among districts would be differences from one community to another in willingness to make financial sacrifices for education.

The fiscal effort put forth by a district can be measured in a number of ways. Somewhat different allocation formulas result depending on what definition is selected. One approach is to measure "effort" by the property tax rate. The corresponding allocation policy would be to assure that all districts in the state that levy a given tax rate receive the same amount of per pupil support. This is the basis of the so-called "percentage equalization" aid formula that has been adopted in several states.[*] However, the property tax rate is not the only possible measure of effort, nor necessarily the best one. Variations in the ratio of per capita income to residential property value, for example, can cause the impact of a given tax rate to vary substantially from one district to another. An income-based measure, such as per capita education expenditure as a percentage of per capita income, would probably provide a more accurate measure of outlay in relation to current capacity to pay.[†] There would then be a positive, one-to-one ratio between per pupil expenditure, on one hand, and local school taxes paid by individuals as a percentage of personal income, on the other. The marginal ratio of per pupil spending to the rate of tax on income would be the same in all districts.

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[*] See Charles S. Benson, *The Economics of Public Education*, 2d ed., Houghton Mifflin Company, Boston, 1968, p. 148. States that have adopted some form of percentage matching include Rhode Island, New York, Wisconsin, and Massachusetts.

[†] It would be necessary to deal with per capita rather than per pupil amounts to avoid distortions caused by differences in the pupil-population ratio among districts. Also, only the residential portion of the property tax would be considered in order to avoid an imputation of high effort to districts that realize substantial fractions of their revenues from business property.

It would also be possible to broaden measures of fiscal effort to take account of other influences on local support of the schools. One frequently cited factor is the unequal burden of noneducational taxes in different school districts (i.e., property and other taxes levied by cities, counties, and other local jurisdictions). High levels of these taxes in urban areas are said to create a "municipal overburden" that reduces voter willingness to raise taxes and places city school systems at a disadvantage. With an income-based measure of tax effort, it would be simple to take account of "overburden" by deducting the per capita amount of noneducational taxes from per capita income. Similar adjustments could be made for other economic factors found to have systematic effects on local tax decisions.

Full Statewide Equalization. *The state should provide equal support per pupil in all districts, adjusting dollar amounts to allow for differences in pupil populations and differences in cost, but with no regard to financial or economic characteristics of local communities.*

The simplest policy is also the most drastic: literal equality in per pupil support. Its adoption would carry equal educational opportunity to its logical conclusion. All funds for educational programs would be collected and distributed by the state. Per pupil apportionments to districts would be permitted to vary according to relevant need factors, which would have to be defined explicitly and incorporated into the allocation formulas. Cost differentials would be allowed for in distributing dollars. Local property taxes would be eliminated. A statewide property tax could be imposed if continued reliance on that revenue source were considered desirable, but local wealth, tax base, and willingness to support education would have no effect on a district's revenues.

The Choices Facing State Policymakers

The nominal distribution policy in California today is minimum adequate support. Existing state aid formulas and tax provisions provide a general framework within which such a policy could be carried out. At present, however, specific provisions of the law fall short of putting that philosophy into practice. A minimal reform effort, therefore, would consist of raising the foundation level to a point that would allow a district to support an adequate program, however defined, with no more than the minimum local tax effort required of *all* districts. If appropriate redistributive measures were taken, only a fraction of the increase would have to be financed by additional state aid.

The effect of carrying out that minimal reform program would be to reduce, but not eliminate, current inequities. Districts would still spend different amounts per pupil, although all would be above a realistic minimum. There would still be expenditure-tax disparities because the tax rate required to provide a better-than-minimum program would continue to depend on local wealth. For the same reason, high-wealth districts, not high-need districts, would remain more likely than others to have generously supported programs.

By opting for the more comprehensive reforms needed to carry out an "equal effort, equal support" policy, the state would accomplish two goals: (1) elimination of expenditure-tax disparities and built-in mismatches of resources to needs, and (2) retention of an element of local control in the choice of educational expenditures and tax rates. Each local district would be free, as at present, to decide its own tax rate in excess of the state-required minimum. The difference is that the state would equalize the proceeds from each percentage point of tax rate. There would continue to be differences in per pupil resources among districts because of differences in willingness, but not in economic ability, to support education.

The most drastic reform would be to eliminate all inequality in support by making school finance uniform throughout the state. The benefit would be that a given child would receive the same support (adjusted for relevant need factors) no matter where he lived. This would entail abandonment of each district's prerogative to make its own decisions on school spending and taxes. Although there is a strong desire at the state level to reduce present inequities, there is, at the same time, reluctance to curtail local political autonomy. The proper trade-off between those two "goods" is perhaps the most fundamental issue to be decided in connection with school finance.

REFORMING THE FOUNDATION AID SYSTEM

With the discussion of distributional criteria as background, we now turn to an examination of specific reform proposals. Alternative state aid formulas are considered in this section. Discussion of alternative revenue raising proposals, except where they are directly linked to state aid allocation, is reserved to Sec. VI.

There is no shortage of alternatives to consider. During the last 2 years, many proposals have been developed in California to change the methods by which state aid is apportioned. A good number have been presented as bills before the State Legislature. They represent a broad spectrum of possibilities ranging from simple increases in aid amounts without structural change to thoroughgoing revisions that would substitute new allocation formulas and move sharply away from dependence on local property taxation. In addition to proposals of California origin, there are plans put forth by school finance experts and reform programs developed in other states. The catalog of plans actually in use in the 50 states provides another set of options. It is apparent that a comprehensive review of specific plans is not feasible. A more practicable approach is to extract the main features of these plans, ignoring many special features and fine distinctions, in order to get at the consequences of major alternative courses of action.

Possibilities for reform within the existing structure are limited, but real. The limitations are evident: Only the least stringent distribution criterion, "minimum adequate support," can be pursued with the foundation type of aid formula. Complete equity in the relationship of tax effort to support cannot be obtained as long as districts differ substantially in taxable wealth. Nevertheless, significant gains can be made: Expenditure and tax rate disparities can be significantly reduced; unintended year-to-year shifts in distributional patterns can be eliminated; and at least crude adjustments for relative need and relative cost can be applied to aid allocations. At the same time, aid computations can be simplified and legislative control of the amount of aid and its distribution can be made more direct. If complementary changes are made to reduce the "localness" of the property tax (which, strictly speaking, would put us outside the framework of the existing system) a good deal more can be accomplished.

Changes in the Aid Formula

Expenditure and tax rate disparities can be reduced without changing the structure of the existing formula at all by increasing the foundation amount for each type of pupil, especially if the increase is accompanied by one or more of the following: (1) a decrease in, or elimination of, basic aid, (2) an increase in the required minimum rate tax, (3) collection and redistribution of "excess" local revenues (see below) by the state. Some improvement could be obtained without raising the total amount of state aid. The overall effect would be a redistribution of aid from high tax base to low tax base districts.

Elimination of the basic aid "floor" in 1969-70 would have reduced aid payments to districts with over $23,000 of assessed value per elementary pupil or over $45,375 per pupil in high school. The savings would have been available to finance either an across the board increase in foundation amounts or an increase in supplementary support. The problem is, however, that elimination of basic aid requires an amendment to the state constitution. Whether such an amendment could receive the necessary popular support is highly problematical.

Raising the required tax rate would make it necessary for all districts to make greater local contributions toward the foundation program. However, the incremental contribution by each district would be proportional to its tax base. If the saving to the state were then translated into an increase in foundation amounts or into increased supplementary aid there could be a substantial net redistribution to the poorer districts. It is probably unrealistic to contemplate raising the minimum required tax rate higher than the prevailing average tax rate.* Nevertheless, even that increase would free a considerable sum for redistribution.

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*Prevailing rates are roughly twice as high as the required rates for each class of district.

Excess local support is the amount of revenue over and above the foundation amount per pupil that a wealthy district obtains by levying only the minimum required tax rate. Retention of excess amounts by the districts undercuts the foundation aid philosophy, since it violates the premise that all districts should have equal access to the foundation amount of per pupil support. This could be corrected by requiring that all excess proceeds from the state-mandated minimum tax be paid into the state school fund. If basic aid were not eliminated, payments (actually reductions in aid) would be required by districts with tax bases greater than the amounts mentioned before. If basic aid were eliminated, then only districts with more than $35,500 of assessed value per elementary pupil or $61,000 per high school pupil would have had to return excess local revenue to the state in 1969-70.

One of the leading, current reform proposals is for a statewide property tax that would replace the required minimum local tax and also generate additional revenue for redistribution. It should be evident that the effect of imposing a uniform minimum rate statewide would be essentially the same as that of raising the required local minimum and collecting all excess local support. In other words, a statewide property tax would have much the same redistributive effect as the set of measures suggested above, but without the stigma of "expropriating" revenues levied and collected locally. A more extensive discussion of the statewide property tax and alternative state revenue sources appears in Sec. VI.

Without an increase in the total volume of state aid, it does not appear likely that even the entire complement of redistributive measures would provide enough money to provide minimum adequate support to all districts. A quantitative analysis would have to be performed to find out how much would become available. In any case, prospects for some of the reforms, especially repeal of the Constitution's basic aid guarantee, are not very good. Therefore, a realistic forecast is that with the existing type of aid formula and without an increase in aid funds even the minimum adequate support criterion probably cannot be achieved.

If the total amount of aid is allowed to increase, then, of course, nothing would prevent setting the foundation amount at a realistic, "minimum adequate" level of support. The amount (actually a whole array of amounts, corresponding to different grade levels and different categories of need) could be established according to any one of the three methods suggested earlier. An increase in the required local contribution (possibly with exceptions for low wealth districts) would still be desirable to avoid an aid increase for districts with an existing high level of spending and to reduce expenditure-tax disparities. A computer analysis could easily be set up to determine both the distributional impact and the added cost to the state of alternative foundation level-tax requirement combinations.

Incorporation of Relative Cost and Relative Need Factors

Interdistrict differences in relative cost and relative need are two conceptually distinct phenomena that are often confused. Expenditure adjustments to reflect differences in relative cost are important because prices paid for resources of a given kind and quality vary from place to place. Compensation for differences in need is necessary because some children are more difficult to educate than others. The existing system already takes account of some cost factors. It provides extra money for small (sparsely populated) districts to compensate for the added expense of running "necessary" small schools, separate aid for special functions like transportation so that they do not draw funds from the educational program, and higher support for students in secondary school to reflect the customary higher cost of education in those grades. There are also need factors in the form of aid for certain categories of exceptional children who are especially expensive to educate. Here, however, we are concerned with other need and cost differentials that are not now taken into account.

Adjustment for Cost Differentials. A sophisticated study would be required to quantify the most important type of interdistrict cost differential, gradations in the salaries that must be paid to attract teachers of a given quality. That study would have to establish how teachers' locational preferences are shaped by a number of district and community characteristics, including salaries and other forms of compensation. With that information, estimates could be made of the extra money needed to attract quality teachers to districts with less attractive surroundings. Aid adjustment factors to enable these districts to compete equally could then be derived.

In the absence of adequate information, nothing has been done to compensate for this type of cost differential. Consequently, districts that are less attractive as places to live and work must either make do with teachers of lower average quality or pay higher salaries. The former is more likely since "unattractive" districts and poor districts are often likely to be the same. Central city districts, in particular, are likely to be at a considerable cost disadvantage not only because they must offer more inducements to teachers, but also because operation and maintenance costs, support services, and many other items are more expensive in urban areas. If this can be documented, it might be appropriate, even without complete information, to institute an "urban cost of education factor" as one step toward resource equalization. This would be distinct from any adjustment for need that might be applied to the same districts on account of their concentrations of disadvantaged pupils.

District size alone is not a legitimate criterion for an urban cost differential. California has large suburban districts that do not share the unfavorable situation of the central cities. Population density or some combination of density and size would be a better indicator. Also, a district should not necessarily be looked at as a unit. Large districts like Los Angeles, San Diego, and San Francisco may have some areas where costs are very high, in terms of what is needed to retain teachers, even though this is not true for the district as a whole.

Another factor that needs to be taken into account is the influence of enrollment growth on per pupil support levels. If we compare districts that are alike in every way, except that one is experiencing a more rapid increase in pupil enrollment, it is likely that the greater burden of school construction costs in the more rapidly growing district will tend to be accompanied by somewhat lower expenditures for current operation. High property taxes for school construction (debt service, etc.) will tend to reduce current educational outlay, just as would high property taxes for noneducational purposes. Only full assumption of construction costs by the state would eliminate the contribution of differential enrollment growth rates to inequality in current spending. Otherwise, children in the more rapidly growing districts will remain at a disadvantage in their access to educational resources.

Adjustment for Educational Need. The main reason for interest in a relative need factor is that it would provide a systematic method for channeling added resources to disadvantaged students. The most direct approach within the existing system would be to add an extra amount to the foundation program for each disadvantaged child. If, for example, 20 percent of the children within a district were identified as disadvantaged, and if the factor were set at 30 percent above the normal foundation level, then the district would receive .20 × .30, or 6 percent more from the state than a comparable district with no disadvantaged children. Appropriate adjustments could be made to allow for resources provided under ESEA Title I and other Federal programs.

With this admittedly crude method of adjusting for need, a very simple index of disadvantageousness could be used, such as the number of AFDC[*] recipients in the district, as is used in determining eligibility for ESEA Title I. More sophisticated measures, possibly with differentiated levels of need, could also be used, but they would require special data collection on a recurring basis. The amount of extra support would have to be set arbitrarily (as is also true of the foundation amount). However, information on the costs of the more successful compensatory education programs in California could be used as a guide in determining the amount needed to be effective. As an indication of the magnitudes involved, it has been estimated that there are 750,000 children in California who might be considered disadvantaged. If the amount needed to "make a difference" is on the order of $300, the total need would be $225 million in extra funds per year, or 17 percent of total state aid in 1968-69.

A policy of outcome equalization would generate a requirement for more precise measures of relative need. Such measures would have to be derived from statistical analysis of the factors contributing to achievement differences in the basic skill areas. A recent article by Walter I. Garms and Mark C. Smith* describes a method suitable for this purpose in which six pupil characteristics, ethnic background, broken homes, welfare, overcrowded housing, student mobility, and parents' education, are used to derive relative need factors for each school. According to the authors, the required data can be assembled by school personnel without undue difficulty. Experimentation along this line in California would be desirable as part of any move toward an output-oriented equal opportunity policy.

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[*] Aid for dependent children.

Allocation of Funds Within Districts. The idea of providing more money to a district because it has substantial numbers of disadvantaged students raises an important issue concerning intradistrict uses of funds. If a district receives extra aid on the grounds that it has pupils who are especially difficult to educate, should the district not be required to use that money for those specific pupils? If so, how can the requirement be enforced? At best, one can hope to assure that the extra funds will be allocated to schools within the district that have concentrations of disadvantaged pupils. State surveillance of allocations within schools seems out of the question. But monitoring resources even at the school level would require data that are not now available, namely, expenditure and staffing data by individual school. Normally, a state demand for such information would be resisted because of the data collection and reporting burden. It happens, however, that the same data are now to be required by the Federal Government as a condition for receiving compensatory funds.† Therefore, they will be

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*"Educational Need and its Application to State School Finance," *Journal of Human Resources*, Vol. V, No. 3, Summer 1970, pp. 304-317.

†Precisely because compensatory funds have been improperly allocated in the past, the Federal Government will soon demand evidence of "comparability," i.e., equal allocations of district funds among schools, exclusive of the Federal funds allocated to target schools. See "Equalized School Spending to be Required by July 1972 for Poor and Affluent Schools," *The Wall Street Journal*, September 28, 1970.

available and could be used in administering need equalization provisions of a state aid formula.

Stability Over Time

The use of absolute dollar amounts in specifying the state aid formula causes unintended "drift" from year to year in financial aid to the districts. Each year, as the cost of education increases, the real value of the fixed dollar foundation amount declines. Each year, also, property value per pupil increases throughout the state, which means that most districts become "richer" and suffer declines in dollar aid. The Legislature has to rewrite formulas annually simply to correct for drift, even if no real changes are intended. Frequently, distributional patterns become distorted because not all the necessary adjustments are made. The entire problem could be avoided by rewriting the formulas in either of the following two ways:

1. *Cost Index Adjustment.* The foundation amount and other dollar amounts in the aid formula could be adjusted automatically each year according to a cost of education index.[*] This would fix the foundation program in terms of real resources per pupil. If maintenance of the level or relative share of state support were considered desirable, the downward drift as assessed value per pupil grows could be arrested by adjusting each district's actual assessed value downward to compensate for the average statewide rate of growth. The net effect of these two changes would be to maintain constant real aid per pupil for any district whose tax base grows at the statewide average rate.[†]

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[*] An index similar to the one used in Sec. III would be suitable, or a more complex index could be developed. One alternative cost index is suggested in the Legislative Analyst's report, *Property Tax and Expenditure Controls in Local School Districts,* op. cit., pp. 17-19. A general price index, such as the U.S. Government's consumer price index, is not suitable because it does not measure the rate of price increase of the specific inputs into education.

[†] It would be undesirable for equity reasons to apply a cost correction to basic aid. Districts that receive only basic aid would, therefore, obtain less real support per pupil in each succeeding year, as they do under the present system.

2. "*Relativization.*" A method that would provide the same stabilizing effects, be less cumbersome, and simplify the control function of the Legislature would be to rewrite the formula wholly in relative terms. Ratios, rather than dollars, would be used to determine a district's share of aid. A district with a certain assessed value per pupil relative to assessed value per pupil throughout the state would receive a certain multiple of the average amount of state aid per pupil. For example, a schedule could be established providing that a district with only one-half the state average of assessed value per pupil would receive two and one-half times the average amount of aid, a district with twice the assessed value would receive one-third the average amount of aid, and so on. The only dollar value that would have to be specified is the average amount of aid per pupil to be provided statewide, which the Legislature would decide each year. Otherwise, there would be no need for annual changes in the formula except for the specific purpose of bringing about a change in the pattern of distribution.

Use of a Weighted Pupil Total in Aid Computations

The existing formula necessitates a dual computation for unified districts (separate aid computations for elementary and high school pupils) plus auxiliary computations for a number of special categories of pupils. New York and other states simplify the computational procedure by using a weighted sum of pupil average daily attendance (WADA) as the base for calculating aid. The New York formula, for example, assigns weights of .50, 1.00, and 1.25 to pupils in half-day kindergarten, grades 1-6, and grades 7-12. Any other set of weights and any number of gradations could be established. The value of the weighting procedure as a means of simplifying computations would become greater as the number of categories increases, as it would if relative need factors for different kinds of pupils were developed. If this change were combined with "relativization" of the formula, the Legislature would merely have to determine the total amount of school aid to be provided each year. The total would be divided by statewide WADA to determine the statewide average entitlement, and all district entitlements would be set relative to that base amount.

Another improvement would be to use average daily membership rather than average daily attendance as the index of number of pupils. The former provides a more accurate measure of the actual staffing requirements of schools. The shift would also make a minor contribution to equalization because districts with more disadvantaged pupils are likely to have a lower-than-average ratio of attendance to membership. This is one of the steps recommended by the Legislative Analyst.*

ALTERNATIVE STATE AID FORMULAS

A more stringent equalization criterion than minimum adequate support can be satisfied only if the existing foundation-type aid formula is replaced. Two classes of alternatives are discussed here. One approach is to make parameters like the foundation amount and the required tax rate variable from one district to another. The other is to use matching formulas that require the state to share costs above, as well as up to, the specified expenditure floors. The latter approach makes implementation of an "equal support for equal effort" policy feasible. Precedent for both approaches can be found in the supplementary aid provisions of the existing formula. Thus, neither represents a complete break with current practice.

In the following discussion, the terms "support" or "aid" should be interpreted to mean dollars adjusted for relative cost and relative need factors. Earlier comments pertaining to the derivation and use of those factors apply here and will not be repeated. Also, the comments about "relativization," price index adjustments, and the use of a weighted sum of pupils apply to these proposals.

A Variable Foundation Formula

One precedent embodied in existing supplementary aid is that the foundation program and the required minimum tax rate do not have to be

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***Analysis of the Budget Bill*, op. cit., pp. 209-211.

the same for all districts. Both are presently set higher in low-wealth districts than in others. The 1969-70 formula changes (see Table 2, page 17) have accentuated the importance of this feature of the allocation system.

One way of redistributing funds from richer to poorer districts--within a fixed state aid budget, if necessary--is to extend and generalize the principle embedded in supplementary aid. The foundation program can be made continuously variable. For districts of average wealth, it might be set, for example, at the current level of foundation support.* For districts with lower-than-average tax bases the amount would be higher and for wealthy districts it would be lower. Very poor districts would receive virtually total support from the state for their educational program. I.e., their foundation amount would be the amount considered necessary for an adequate program, taking account of cost levels and characteristics of the pupils, and they would receive the full amount less only a small local contribution.

The mechanics of such a plan would be simple. A formula would specify the amount of support per pupil to be guaranteed by the state to a district with any given tax base. The amount would be a decreasing function of tax base. For example, a district with only $5000 of taxable property per pupil might be guaranteed an $800 program while a district with $25,000 per pupil might be guaranteed only $300. Each district would receive aid equal to the amount of the guarantee less a required local contribution. The district itself would be responsible for financing all outlays in excess of the guarantee.

The expected effect would be to increase spending and reduce tax rates in low-wealth districts and to decrease spending and increase tax rates in high-wealth districts. There would be a reduction in both expenditure inequality and in interdistrict disparities in the expenditure/tax rate ratio. By calibrating the formula carefully, it would be possible to assure any district making an average tax effort (by current standards) at least an average level of per pupil support.

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*If the total budget remained constant and basic aid were retained, districts of average wealth would have to receive less aid than at present.

Another step to take, either in conjunction with a variable foundation program or even as a separate reform within the existing system, would be to make the required minimum tax rate lower for less wealthy districts than for others, thereby freeing some "fiscal capacity" in the poorer districts for support in excess of the foundation levels. Correspondingly, a requirement for greater tax effort by wealthier districts in order to qualify for foundation support would tend to reduce expenditure-tax disparities. But the latter would have to be accompanied by elimination of basic aid and/or state collection of "excess" local revenue to avoid expenditure increases by the wealthiest districts.

Variable Matching Formulas

A variable matching formula is one in which the state matches each dollar of local spending in a prescribed ratio, but in which the ratio varies from district to district according to a specified equalization formula. The most common form of variable matching is the "percentage equalization grant,"* which is designed to make per pupil expenditure in each district proportional to the local tax rate. Formulas can be written, however, to produce relationships other than simple proportionality or to link support to other measures of fiscal effort.

Supplementary aid, under existing law, has the form of a variable matching grant. In 1969-70, for example, the formula matched the proceeds of tax levies between 1.0 and 2.0 percent in elementary districts with less than $12,500 AV/ADA. An elementary district with $5000 AV/ADA, levying a 2.0 percent rate would have received $75 per pupil of state supplementary aid to match $50 per pupil of local revenue in excess of the required local contribution to the foundation program. That is the equivalent of a matching grant with a state share of 0.6. A district with $10,000 AV/ADA would have received $25 per pupil to match $100 per pupil of locally raised funds, i.e., a state share of 0.2. The matching provisions have little room to operate at present because of the $125 ceiling on supplementary aid (in 1969-70) and the limitation to low-wealth districts. Nevertheless, a principle and precedent is established.

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*Charles S. Benson, op. cit.

One policy alternative would be to divert the bulk of future increases in state funds to the supplementary aid component of the existing formula. The $125 supplementary aid ceiling, the eligibility level for participation, and the amount to be guaranteed a district for each percentage point increment in tax would be raised as rapidly as available funds permit. Supplementary aid would cease to be an extra grant for low-wealth districts and instead become a general matching grant to all districts willing to tax themselves more than the required minimum. With a more liberal supplementary aid ceiling, more districts would become subject to the matching provisions of supplementary aid and would cease to view it as a mere increase in foundation support. The fact that a district would be guaranteed a certain program increment for each percentage point of added tax, rather than only the actual local proceeds of the tax, would tend to make program improvement more attractive to local school boards and citizens. Other things being equal, the use of a matching formula to channel new state money should stimulate greater local effort, or at least a lower tendency to substitute state aid for local revenue, than a corresponding increase in foundation program aid.

Variable matching formulas can be designed to approach as closely as desired to the criterion of equal support for equal effort. The degree to which that distributional goal is achieved depends on all the following characteristics of the aid mechanism: (a) whether matching is open- or closed-ended (see below); (b) whether there are constraints, such as an aid "floor" or "ceiling" or a minimum or maximum permissible state share; (c) whether "excess" revenues of high-wealth districts are collected by the state; and (d) what measure of fiscal effort is written into the formula. All of these features are discussed below.

The Basic Mechanism. The objective of a variable matching formula is to assure that total available revenue (state plus local) in each district will be in some fixed, positive relationship to a measure of fiscal effort. If that relationship is to be one of proportionality, a "percentage equalization" formula is used. That formula can be written as

$$s = (1 - a\frac{v}{v_o})e,$$

where s is the amount of state aid per pupil to be provided to a given district; e is total state plus local spending per pupil in that district; v/v_o is assessed value per pupil in the district, expressed as a proportion of assessed value per pupil in the state; and a is the average, statewide local share. The quantity in parenthesis is the *state share*, or fraction of support to be provided by the state, which varies inversely with assessed value per pupil.

The effect of the formula, as written above, is to provide the same level of expenditure per pupil in every district that levies a given tax rate. To illustrate, suppose that average assessed value per pupil in the state, v_o, is $16,000 and the average, statewide local share, a, is 50 percent (.50). Then a district with $12,000 AV/ADA would receive 62.5 percent [1 - .50(12,000/16,000) = .625] of its revenue from the state and a district with $24,000 AV/ADA would receive 25 percent [1 - .50(24,000/16,000) = .25]. With a tax rate of 2 percent, the first district would raise $240 per pupil locally and receive $400 per pupil from the state, a total of $640; the second district would raise $480 locally and receive $160 from the state, also a total of $640. The two districts would have identical tax rates and identical levels of per pupil spending even though one has twice the tax base of the other. In general, all districts that levy a 2 percent rate would have one level of spending, all districts with a 3 percent rate would have another, and so on, *regardless of assessed value per pupil.* The direct connection between tax base and school spending that exists with a foundation formula would be broken. The only exception would be for the wealthier districts, which, as with a foundation plan, would take in "excess" local revenues.

In practice, states that use percentage equalization often impose constraints that dilute the equalization features of the formula. New York State, for example, in 1968-69, set a ceiling of $760 per pupil on the amount that the state would share, a $238 per pupil floor on the dollar amount to be paid to each district, and an upper limit of 90 percent on the state share.[*] All of these restrictions tended to reduce equalization. In particular, districts spending more than $760 (the great majority of districts) were, in effect, receiving a foundation program of that amount and were on their own thereafter, which means that disparities similar to those in California were permitted to exist.

Open-ended and Closed-ended Matching. The New York formula, with its $760 ceiling, is an example of closed-ended matching. Rhode Island, on the other hand, has an open-ended formula: The state will match any amount of district outlay at the calculated state sharing ratio.[†] Fears were once expressed that an open-ended system would invite unlimited spending by districts that receive most of their funds from the state. However, there is little basis for this concern. The effect of the formula is to make the "price" of a given educational program equal to all districts. Very poor districts that receive 90 percent or more of their funds from the state would have more incentive to pay high tax rates than they do without matching. But the burden of any given tax rate is at least as severe for a poor district as for a wealthy one. Thus, there would be no tendency to increase the local tax rate to exorbitant levels, simply because of the availability of additional state aid, even with generous matching provisions.

Constraints. The effect of a ceiling on aid has already been mentioned. Another type of constraint is an aid floor, i.e., a provision requiring that every district receive at least a minimum amount of aid per pupil no matter how high its tax base. The effect of a floor is similar to the effect of basic aid in California: It gives high tax base districts the advantage of being able to support a given program with a lower tax rate than other districts. Limits have also been placed on the expenditure share that the state will pay. The 90 percent maximum in New York has already been mentioned. In Massachusetts, the state share is more narrowly limited to the range from 15 to 75 percent.[*] This means that very poor districts that might be entitled to more than 75 percent state funds according to a "pure" percentage equalization formula will receive less, while wealthy districts that might be entitled to less than 15 percent will receive extra aid. In general, aid ceilings, floors, and maximum or minimum limits on the state share all work to place the wealthier districts at a relative advantage and the poorer districts at a relative disadvantage in ability to support education. This is precisely what the percentage equalization concept was intended to avoid.

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[*] The University of the State of New York, the State Education Department, *Analysis of School Finances: New York State School Districts, 1967-68*, Albany, N. Y., May 1969, pp. 5-7.

[†] Benson, op. cit., p. 189.

Excess Revenues. Very wealthy districts would obtain more support than others at a given tax rate even with zero state aid. Full equalization would require the state to take the extra proceeds and add it to the general fund for redistribution to other districts. If this were not done, the policy of "equal support for equal effort" would apply to all except the wealthy districts. Compared to other districts, the wealthy would enjoy "greater support for equal effort" or "equal support for less effort." Only by redistributing the excess local revenues would it be possible to establish a single relationship between effort and support applicable to all local units. In effect, each local district would be able to select a tax rate and level of support from a schedule like the following:[†]

Tax Rate (%)	*Support per Pupil*
3.0	600
3.5	700
4.0	800
4.5	900
5.0	1000

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[*] *Public School Finance Programs, 1968-69*, U.S. Department of Health, Education and Welfare, U.S. Office of Education, Washington, D.C., 1969, p. 134.

[†] The state would apply relative need and relative cost adjustment factors to the support level selected by each district in order to determine the actual number of dollars to be allowed that district.

The authors of a recent book on educational finance have termed this plan "power equalizing" to emphasize that it eliminates the influence of the local tax base and makes spending dependent only on local willingness to tax.*

An Income-Based Measure of Effort. For reasons already discussed in Secs. III and V, income provides a better measure than property value of community ability to pay. It follows, therefore, that a policy of "equal support for equal effort" would be more equitable with "effort" measured in relation to local income than in relation to the property tax base. It is quite feasible to use income in the computation even though taxes are levied on property. The important thing to know is the amount of taxes paid by individuals relative to personal income. How the tax is actually calculated is irrelevant.

The mechanics of an allocation system using an income-based definition of effort would be the same as with a property-based definition. Instead of the schedule shown above, there would be an analogous schedule such as the following:

Taxes on Residential Property as Percentage of Personal Income	*Support per Pupil*
2.0	640
2.5	800
3.0	960

Note that only taxes on residential property would be counted in determining effort. Inclusion of taxes paid by business and industry would defeat the purpose of the attempt to equalize support relative to personal income.

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*John E. Coons, William H. Clune, III, and Stephen D. Sugarman, *Private Wealth and Public Education*, The Belknap Press, Cambridge, 1970. Note, however, that even establishment of a single support versus tax rate schedule may not eliminate all effects of differences in wealth on school spending. A wealthy district may still find itself better able to "afford" a given percentage tax rate than a poor district, in which case some positive correlation between wealth and spending would remain. This could be compensated for only by making the rate schedule *progressive*, i.e., by requiring a wealthy district to levy a *higher* rate than a poor district to obtain the same level of per pupil support.

A useful property of this allocation formula is that it facilitates the task of adjusting for differences in noneducational taxes ("overburden") among communities. All that would be necessary is to adjust personal income by subtracting the amount of nonschool property taxes before calculating effort.

Allocation according to the income-based standard would have the following advantages: (a) It would eliminate inequities arising out of variations in the ratio of property value to income among districts. (b) It would compensate in part for regressive tendencies of the property tax (see Sec. VI). (c) By shifting to a per capita rather than a per pupil base, it would compensate for inequities stemming from interdistrict variations in the pupil-population ratio.

Collection of new data would be required to operate the formula. Necessary items would include the total population of each school district (needed to calculate per capita support), per capita personal income, and the proportions of residential and nonresidential property in local tax bases. The absence of these data at present makes it difficult to do a thorough analysis of existing distributional patterns or to project the consequences of alternative aid formulas.

Nonproportional Effort-Expenditure Relationships. Finally, variable matching does not necessarily have to be designed to produce proportionality between fiscal effort and program support. It may be thought that, as for Federal and state income taxes, a progressive standard is needed to extract equal sacrifice from taxpayers with different incomes. A nonlinear state share formula could easily be developed to implement that doctrine.

To sum up, the policy of "equal effort, equal support" can be implemented with a variable matching grant. The type of formula that would do this most nearly perfectly would be an open-ended one incorporating relative need and relative cost factors, with no aid constraints, calculated according to an income-based measure of effort, and with "excess" local revenues payable to the state. Less perfect, but more politically feasible forms of variable matching, including a formula based directly on existing supplementary aid provisions, would provide substantially greater equality of opportunity than the existing system.

FULL STATE FINANCING

Full financing of public education by the state is the only alternative that would guarantee equal financial support for pupils regardless of where they live in the state. Most of the complexities of school finance would disappear if this solution were adopted. There would be no need for local school levies or tax elections and much of the apparatus of intergovernmental aid to education could be dismantled. Revenue and expenditure aspects of school finance could be dealt with separately. The question of resource allocation could be dealt with wholly in terms of educational criteria. The question of tax distribution could be dealt with as part of the statewide revenue picture without impinging on educational concerns.

Distribution of funds to districts would be in proportion to their (appropriately weighted) enrollments. Differences in need factors and in resource costs could be taken into account, as with any other formula. Weighted average daily membership, adjusted for cost differences, would be the main criterion for apportionment. Separate provisions would be made for certain elements of cost, such as pupil transportation expense and capital outlays, for which needs depend considerably on local circumstances.

Opponents of this proposal have often claimed that a surrender of fiscal responsibility to the state would be accompanied by a loss of local authority to control educational programs. There is no logical reason why this need be so. Districts could be given at least as much authority as they have now to determine programs, curricula, instructional methods, and the details of resource utilization. One exception is that the state would be likely to require evidence that extra funds made available to a district on grounds of educational need were actually being used for the intended beneficiaries. However, this requirement is likely to be imposed whether or not the financial system is changed.

With resource disparities eliminated and with allowances made for differences in need, a more favorable environment would be created for emphasizing performance and effectiveness aspects of school management. Statewide evaluation and accountability might be more readily accepted because resource disparities could no longer be cited as a major cause of unequal results. With appropriate action by the Legislature, it would be possible to encourage local initiatives to search for more effective forms of instruction within given levels of support.

An objection to the proposal for statewide equalization is that it would prevent communities willing to pay the price from providing superior educational programs for their children. Such supplementation would, of course, undermine the purpose of the program, which is to establish equal educational provision throughout the state. It should be realized, however, that the privilege of supplementation is one held very unequally under the present system. Residents of upper income suburban communities with their own school districts are free to vote extra funds for their children's education. Residents of upper income communities in Los Angeles have no such freedom since, at least in principle, resources are equalized over the whole, vast district. The power of citizens to express their educational preferences, being very much a function of district boundaries, is available to some but not to others. If districts were organized along more rational lines the case for voluntary local supplementation would be stronger, especially if additional support were available on a strict "equal support for equal effort" basis. But to allow supplementation with districts organized as they are now would merely perpetuate inequities arising out of the connection between wealth and school support.

VI. HOW SHOULD SCHOOL REVENUES BE RAISED?

The obverse of the resource allocation issue is the controversy over how tax funds for the schools should be obtained. This is a sensitive subject since it directly affects the distribution of tax burdens among individuals and communities. The inequities of the present system are apparent, yet any change would make some people worse off at the same time as it benefited others. That being the case, it is no easy matter to obtain acquiescence in tax reform on the basis of abstract equity principles. Nevertheless, with some type of tax reform imminent in California, and with the school system certain to be affected, it seems important to review the arguments that may become guides to action.

MAJOR ISSUES

The basic issue on the revenue side is what mix of taxes should be used to finance California public education. The present mix consists of a combination of local property taxes and state general revenues in proportions of roughly three to two. A debate has gone on for years over the "proper" state share. More important, perhaps, a debate continues over how both state and local taxes should be raised. The major policy questions may be summarized as follows:

1. Should the present ratio between local property taxes and state general revenues be changed? Specifically, is the state share too low, as is frequently contended, and, if so, how much should it be increased?
2. Are there viable alternatives to the local property tax in its present form? Specifically, (a) are there alternative local tax sources that can be seriously considered or (b) can the property tax itself be made more equitable?
3. If support from the state is increased, how should the additional expenditure be financed: out of general revenue, as at present, or out of a special earmarked tax for education? If the former, what specific state taxes should be raised? If the latter, what form should the special tax take?

It is not possible to examine the revenue issue thoroughly within the scope of this paper. Some of the questions under item (3), in particular, can be dealt with only in the context of statewide tax reform, which transcends school finance. Emphasis is given, in a necessarily brief discussion, to points that bear most directly on current proposals for financial reform.

STATE AND LOCAL SHARES

Although there has been much agitation in favor of shifting more of the burden of school support to the state, the issue of the "proper" state share is a derivative one, subsumable under the broader issues of resource allocation and tax mix. Demands for increasing the state share make sense only insofar as the shift would produce a redistribution of funds among districts or a redistribution of tax burdens among individuals. Most of the proposals suggested in Sec. V for enhancing the equity of interdistrict allocations would, as a practical matter, have the effect of increasing the state fraction of support. It is not the increase itself that is desired, however, but the improved distribution that will presumably result from allocation by the state. Similarly, on the revenue side, it is not a preference for state over local taxation *per se* that we hear expressed, but a preference for the distributional effects of revenue sources controlled by the state as opposed to those of local property taxes. Accordingly, rather than attempt to deal with the question of state-local proportions directly, we will concern ourselves with the merits of the particular tax sources that are available at each level.

THE LOCAL PROPERTY TAX

We can apply the same criteria in evaluating local school property taxes as we would with any other taxes: *horizontal equity*--Are all individuals in the same economic circumstances treated equally? and *vertical equity*--Are individuals in different circumstances accorded "fairly" differentiated treatment consonant with ability to pay?*

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*Richard A. Musgrave, *The Theory of Public Finance*, New York, 1959, Chaps. 5 and 8.

It is also useful in discussing school finance to distinguish between equity *within* districts (Is there "equal treatment of equals" within each taxing unit?) and equity among districts (Are people in comparable circumstances treated the same regardless of where they happen to live?).

The local property tax clearly fails to provide equity either within or among school districts. Consider these two situations:

1. Of two identical homes in a district, both assessed at $7500, one is owned by a couple with $3000 annual retirement income, the other by a younger family earning $15,000 a year. The same 4 percent school tax is imposed on each home. It takes 10 percent of the income of the couple, 2 percent of the income of the family.
2. Two families with identical $15,000 incomes and homes assessed at $7500 live in two different districts. District A, with a heavy concentration of industrial property, has $24,000 of assessed value per pupil. District B, which is mainly residential, has only $8000 per pupil. District A taxes itself at 2.5 percent and spends $800 per pupil. District B taxes itself at more than 4.2 percent to spend the same amount. The families in the two districts spend 1.25 and 2.10 percent of their incomes, respectively, to support equal education programs.

In case 1, the inequity arises because the property tax acts like a specific consumption tax (on housing services) rather than a tax on more broadly-defined ability to pay. The excess burden on the poor and retired is especially severe.[*] The inequity is widespread and will be found wherever there are disparities in the relationship of property value to income among individuals or communities.

In case 2, the problem is that business and commercial property, which is distributed nonuniformly among districts of the state and in no particular relationship to local incomes, numbers of children, or educational needs, is fully taxable by the district that happens to contain it. Thus, of two districts with roughly equal per capita incomes and roughly equal amounts of assessed *residential* property per pupil, one can appear as a "wealthy" district in the school finance statistics and the other as a "poor" district because of the former's good fortune in including business property within its boundaries. This factor alone accounts for a major part of the variation in tax bases among districts and is the source of much of the expenditure and tax inequality throughout the state. It finds ultimate expression in the existence of deliberately created tax enclaves--areas with large amounts of industry and few children--organized specifically to gain property tax advantages.

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[*] See Advisory Commission on Intergovernmental Relations, *Fiscal Imbalance in the American Federal System*, Vol. 1, A-31, Washington, D.C., October 1967, p. 124.

As to vertical equity, the findings of a number of studies of the property tax are summed up by Dick Netzer in these words:

> Taxes on residential property have been found, without exception, to be markedly regressive when compared to money income before taxes; when Federal income tax deductibility of state-local taxes (on owner-occupied properties) is taken into account, the regressiveness is even greater.[*]

Netzer's evidence comes from special studies of the relationship of property tax payments to family income in a number of different states plus studies of property tax payments reported on Federal income tax returns.[†] A prominent feature of the findings is the very large fraction of incomes of the lowest bracket income earners taken by property taxes. Regressivity persists at higher income levels, but is less pronounced. Unfortunately, there do not appear to be comparable studies of the incidence of the property tax specifically for California. However, there is little reason to believe that qualitatively different conclusions would be obtained if such a study were carried out.

The property tax has also been criticized on other grounds, which we will not go into here.* However, its horizontal and vertical equity shortcomings alone provide ample motivation for a search for alternatives. The question is, can the property tax be modified so that the shortcomings are corrected, or is a partial or complete shift to other tax sources the only acceptable solution.

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[*] Dick Netzer, *Economics of the Property Tax,* The Brookings Institution, Washington, D.C., 1966.

[†] Ibid., p. 46 and pp. 47-51, respectively.

More Equitable Local Property Taxation

Attempts have been made to solve the intradistrict equity problem. Wisconsin, for example, created a so-called "circuit breaker" provision to prevent the property tax from taking more than a certain fraction of the earnings of low income property owners.† Another approach, adopted in California and a number of other states, is to exempt a certain amount of property (the first $750 of assessed value in California) from property taxation. This lowers the proportionate burden of the tax on the poor. Another approach would be to authorize a credit against state income tax for property tax payments up to a certain amount. However, because little or no income tax is paid in California by those in the lowest income brackets, that approach would be successful only if negative income tax payments by the state were allowed.

The problem of interdistrict inequalities in property taxation can be dealt with either by reducing disparities in local tax bases or by using state aid to cancel out their effects. Variable matching formulas designed to do the latter were discussed in Sec. V. If appropriately designed, such formulas would eliminate much of the existing variation in property tax burdens and would reduce expenditure inequality. Nearly all the remaining variation would be attributable to differences in local willingness to support the schools. The closest approach to equal treatment of equals, assuming retention of the property tax in its present form, would be to use a variable matching formula with (a) an income-based measure of local effort, as described in Sec. V, (b) no constraints to restrict equalization, and (c) collection and redistribution of excess local revenues by the state.

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*For example, we have not discussed the problem of inequities in assessment across counties and districts or among classes of property. Weaknesses in assessment practices and other aspects of administration are among the most frequently mentioned drawbacks of the property tax. Also, the property tax is criticized because its elasticity is too low. The local property tax base typically does not grow rapidly enough to maintain a constant level of support per pupil (in constant dollars) without regular rate increases.

†Advisory Commission on Intergovernmental Relations, op. cit., p. 128.

Separation of Residential and Nonresidential Components of the Tax Base

One of the reasons for today's unequal expenditures and tax burdens is that industrial and commercial property--which is much less equally distributed than residential property--counts as part of the local tax base. If districts were permitted to tap only the residential tax base for funds beyond the foundation level, the range of variation in proceeds per percentage point of tax would be sharply reduced. As a guess, the range would be approximately 2 to 1 instead of the present 4 or 5 to 1. The nonresidential component of property would be taxed uniformly statewide. This itself would represent a gain in equity, particularly since industrial tax enclaves would be eliminated.

Several bills before the 1969 Legislature included provisions for partitioning the tax base.* However, the proposal was not reinstated in 1970. One reason was that there were technical problems in effecting the needed separation of the tax base. Another was doubt as to the feasibility of passing the needed constitutional amendment. Had the proposal been enacted, especially in combination with a statewide tax on residential property (supplementable by local districts) and increased supplementary or matching aid, it would have gone a long way toward eliminating adverse distributional effects of the property tax system.

An Alternative Local Tax Source?

The question naturally arises whether it would not be easier to shift to a different local tax source than to attempt to repair the inherently inequitable property tax. The idea is theoretically appealing. Unfortunately, it breaks down because of the practical problems associated with each alternative.

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*E.g., Assembly Constitutional Amendment No. 70, in the 1969 session of the Legislature, would have authorized the Legislature to distinguish between residential, agricultural, and other property and would have imposed statewide taxes on the latter two. Note that a constitutional amendment would have been required to make this change.

The two obvious candidates are local income and consumption (sales) taxes, either of which could be levied as "piggybacks" on the corresponding state taxes. The sales tax has the disadvantage of being regressive, though probably not as much so as the property tax (see below). The sales tax would, however, produce far fewer cases of unequal treatment of individuals within a district. The state income tax is progressive and a locally-imposed income surtax would share that quality. It also is largely free of horizontal inequities. Either tax would tend to equalize opportunities across districts in comparison with the existing system.

The fundamental obstacle to local income or sales taxes is the large number of districts and the small size of many districts in the state. One can readily imagine the problems the state would face trying to administer hundreds of local taxes, some applicable to only a few hundred families. On administrative grounds alone, the vast proliferation of local tax provisions would be impractically burdensome. Apart from that, chaotic local tax competition would result and patterns of economic behavior would be distorted. A small district, for example, could not impose higher sales or income taxes than its neighbors without driving away business or residents. With an income tax, there would be a tendency for high income families to form new tax enclaves in which schools could be generously supported at low surtax rates. Thus, some of the problems that reform was intended to eliminate could reappear in new guises.

If school districts were fewer and larger, nonproperty school taxes would be more feasible. In Maryland, for example, where schools are organized into county systems, the counties are empowered to levy local supplements to the state income tax.* This suggests that a similar function could be performed at the county level in California. However, for historical reasons, California counties do not represent rational groupings of school districts. Special regional taxing authorities would be another possibility. But there seem to be few, if any, advantages to such an arrangement, relative to statewide tax equalization, that would justify the complexity of a three-tier system of school support.

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*Public School Finance Programs, 1968-69, op. cit., p. 128.

STATE REVENUE SOURCES

General State Taxes

Major sources of general state revenues, the income tax and the sales tax, are considered to be free of important horizontal inequities. Most debate over tax reform centers on the vertical equity question: How progressive are these taxes relative to each other and relative to the local property tax they may replace?

It is generally agreed that the California income tax is progressive, though how much so and over what range is uncertain. As with the Federal income tax, actual progressivity is bound to be less than the nominal rates suggest because of the deductions and other provisions that are increasingly used at higher incomes. Nevertheless, the income tax is the only clearly progressive major revenue source available to the state.

There is considerable controversy as to the progressivity of the sales tax. A comprehensive sales tax would clearly be highly regressive. However, defenders of the California general sales tax assert that because food, rent, and medicine are not taxable items the tax burden is roughly proportionate. No empirical study for California has been located. However, a study of the identical question in the State of Indiana found that the assertion of proportionality did not hold. Even with food excluded, the tax took a slightly higher fraction of the earnings of low income families.*

With no direct data on the incidence of California taxes, it is impossible to be sure about the amount of redistribution that would accompany a shift from the local property tax to general state revenues.

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*Advisory Commission on Intergovernmental Relations, op. cit., p. 125.

One thing that is clear is that there would be a significant gain in interdistrict horizontal equity. A greater part of the school tax burden would take the form of taxes imposed statewide at uniform rates. Extraneous factors, such as the location of industry, would have less influence on tax bills. An individual would not be penalized for having higher housing costs relative to income than the average taxpayer. The effect on vertical equity would depend on what specific state tax rates were raised to replace property tax revenues. A shift to state income taxes would tend to make the whole tax mix more progressive, assuming that the present shape of the rate structure were retained. A shift to the sales tax would have a less clear-cut effect. Even if there were no gain in progressivity, however, the improvement in horizontal equity within and among districts would make a shift attractive.

A Shift to a Statewide Property Tax

One of the proposals most likely to be enacted, having been introduced in two successive years as part of the Governor's tax reform legislation, is a statewide property tax for the schools. This was referred to briefly in Sec. V. As generally envisioned, the tax would take the form of a uniform statewide levy on all taxable property. The proceeds would go into the state school fund and be distributed to districts with no regard to the original source of funds.

The effect of such a levy would depend on its size relative to current levels of taxation. If, for example, the statewide tax rate were set at 2.05 percent (the combined state-mandated rate for elementary, high school, and junior college grades), the result would be virtually the same as if the state had undertaken to collect and redistribute excess local revenue (see Sec. V) under the present system. That is, every district, including the very rich, would be able to obtain precisely the present foundation amount of support per pupil at the specified tax rate. That, in itself, would fund only a small increase in foundation support. There would be a redistributive effect only from the wealthiest districts to all the others.

If, on the other hand, the state's uniform rate were set at about the current average local rate, there would be a more substantial redistribution. All taxpayers in districts with lower than average rates would find themselves paying more than at present. The net redistributive effect would depend on how state funds were apportioned. Assuming that all state funds (the property tax proceeds plus general revenues already available) were simply distributed on a uniform per pupil basis, the following effects would be expected:

1. Low wealth districts that had previously taxed themselves heavily to provide average or above average levels of per pupil spending would now be able to have better programs or lower tax rates or some combination of the two.
2. Low wealth districts with relatively low tax efforts would be brought up to average levels of both expenditures and tax rates.
3. Wealthy districts with average or above average tax rates would find themselves having to pay still higher rates to support their superior programs. In many cases, this would induce them to cut back spending toward the average.
4. Wealthy districts with lower than average tax rates (including the very wealthy with below average taxes and superior programs) would find themselves paying higher rates for fewer resources. This would probably induce a mixture of program cuts and rate increases to maintain program levels.

The overall effect would be to reduce expenditure inequality and expenditure-tax rate disparities. Property tax inequities *within* districts would not be affected, but inequities stemming from tax base differences among districts would be significantly reduced. Inequality in support would continue to exist to the extent that districts varied in their ability and willingness to supplement the state-funded program. Substantial redistribution would be accomplished with no major shift from one tax source to another.

It should be realized, however, that the same effects could be obtained by shifting from the local property tax to *any* state tax. A state property tax is attractive primarily because it would cause the least disturbance of existing patterns. Shifts to general state revenue sources would confer all the same benefits plus reductions in intradistrict inequities plus a more progressive tax structure, especially if the income tax source were used. Therefore, although a shift to a statewide property tax would represent a major gain in tax equity relative to the current system, it does not represent as much of a gain as could be realized by an equal shift to general state revenues.

In addition to proposals for a statewide school property tax, there have been other suggestions for establishing special, earmarked taxes for education. As long as the distributional effect of such a tax is no less desirable than that of general taxes, this would create no immediate problem. However, if a connection were established in the law between the proceeds of the earmarked tax and the amount of state aid, this could have adverse long-run consequences. If an insufficiently elastic tax were selected, the same kind of pressure as we have become accustomed to with the property tax would again plague education. There would be constant battling over annual rate increases. Since there is no logical cost-benefit relationship between public schooling and any particular tax source (as there is, for example, between highway user taxes and highway construction funds), there seems to be no strong justification for earmarking. A shift from local property taxes to a statewide property tax--which is an earmarked state tax--might be thought desirable to avoid the shock of a larger shift in the distribution of burdens. Other than that, the use of general state revenues, with emphasis on the income tax, appears to be the most desirable solution to funding increased school support.

TAX OR EXPENDITURE CONTROLS BY LOCAL VOTERS

Education is unique among public services in California in that local voters in school districts are empowered to act directly, over the heads of their elected representatives, to determine the level of financial support for programs. Control by the voters is indirect; that is, it operates through the setting of tax ceilings, rather than actual levels of annual expenditure. Nevertheless, elected school board members, who are responsible for the quality of educational services, are denied the authority granted to governing bodies of all other local jurisdictions, to determine what they consider to be the desirable level of program funding.

What are the consequences of voter control? Among them are at least the following:

1. Less is spent on public schools than would be if school boards were free to set tax rates, as are other local governing bodies, with only loss of tenure in office as the penalty for public displeasure. This is self-evident. A local tax override election can only result in less, not more, spending than the board itself would approve. It is the board itself that must propose, and would presumably approve, a tax rate increase. Moreover, tax override defeats do not measure the extent of the curtailment of funds. Very often, a board is deterred even from proposing an increase by the prospect of defeat at the polls.
2. Other local agencies probably spend more than they would otherwise because local voters can act directly to limit school outlays. School tax elections provide a safety valve for voter resentment of taxes in general. If, say, welfare costs are higher than voters want to support, they can compensate by holding down school outlays. Without such a mechanism, other jurisdictions would face greater political opposition to their tax increases and might find it necessary to curtail their programs. In that sense, tax election requirements subsidize other programs at the expense of education.

   The other side of the coin is the claim that school districts need external expenditure controls because they do not consider the competing claims of other public programs and, therefore, would be inclined to overspend. This implies that an independent school district would be inclined to spend more for education than a general purpose government with education as only one of its responsibilities. However, studies of school district expenditure behavior have not shown that spending differs between fiscally dependent and fiscally independent school systems. Therefore, this argument is not supported by the evidence.[*]

3. The tax election provision contributes to expenditure disparities among districts, especially to the detriment of large city school systems.[†] This is a corollary of (2). To the extent that voter resistance to school tax overrides reflects displeasure with levels of taxes in general, that resistance will be greater--and spending lower--in communities where other local tax rates are high. Those are generally the big cities. Hence, the effects of "municipal overburden" are accentuated by the tax election mechanism.
4. As long as the cost of education continues to rise faster than assessed value per pupil, the system of tax ceilings and tax override elections will be biased toward *reducing* the educational program, rather than holding it constant. A fixed tax rate will bring in fewer real dollars each year, and voter approval will be needed merely to maintain existing resource levels.

In principle, the way to overcome these problems is simply to eliminate the requirement for voter approval of tax increases. A bill that would have ended tax elections in California school districts as of July 1971 was enacted in 1967, but was itself annulled by later school finance legislation. At present, with the high level of property taxes a major political issue, repeal does not seem to be politically feasible. It could become a realistic possibility in the context of broad tax reform or a shift of responsibilities (e.g., for welfare) from local government to the state. An alternative solution, of course, would be to shift the school tax burden to other revenue sources, which would automatically liquidate the problem. Meanwhile, it can at least be said that the tax election provision, with its attendant problems, provides a strong stimulus toward one or another of these options for reform.

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[*] See H. Thomas James, James A. Kelly, and Walter I. Garms, *Determinants of Educational Expenditures in Large Cities of the United States*, School of Education, Stanford University, 1966, p. 120.

[†] Advisory Commission on Intergovernmental Relations, *State Aid to Local Governments*, A-34, Washington, D.C., April 1969, p. 36.

As long as tax elections are retained, changes should be considered that would alleviate some of their shortcomings and make them more effective as instruments of fiscal control. Suggested modifications are as follows:

1. Tax override elections could be transformed into referenda on proposed expenditure increases. Voters would, in essence, be asked to decide whether they want to pay the price for proposed educational improvements. The ballot proposition would specify the increase in support per pupil, the proposed uses of funds, and the expected educational benefits. In this way, citizens would be able to express their willingness to pay the price of a specific set of educational improvements.
2. Consonant with (1), an election would only be required when the district proposes to increase *real*, rather than *monetary*, support per pupil. A district would be allowed to levy increased taxes to compensate for year-to-year increases in cost and enrollment without approval by the voters. The amount that could be levied without an election would be determined by applying a cost of education index (such as the one used in Sec. III) to per pupil expenditure in the previous year. This is identical with a recommendation by the Legislative Analyst.* The price index must, however, be one that realistically reflects costs of educational resources. Use of a general consumer price index, as some have recommended, is unacceptable because that index grossly understates the rate of price increase of the specific inputs into education.
3. When an election is held, it should apply to actual expenditures for one or more school years, not to a ceiling intended to provide tax leeway for unspecified future increases. This would make the referendum a more direct instrument of voter control.

***Property Tax and Expenditure Controls in Local School Districts*, op. cit., pp. 17-19. Our recommendation (1) is also similar to the Legislative Analyst's except that his applies to revenue and ours to expenditure (ibid., p. 37). We prefer the latter because it encourages output-oriented decisions.

With these changes, the major adverse effects of the existing system of voter approval would be eliminated and more educationally meaningful expenditure control would be exercised by the electorate.

VII. ALTERNATIVE REFORM PROGRAMS

When school finance reform comes in California, it will probably be carried out according to an overall plan involving changes both in resource allocation and in the raising of school revenue. Many such plans or combinations can be assembled out of the specific policy measures described in Secs. V and VI. In this section, we formulate and assess a small number of such reform programs, selected to illustrate the major, qualitatively different levels of reform available to state policymakers.

A set of four alternative programs, as follows, suffices to illustrate the major policy choices:

1. A Moderate Reform Program, implementing the philosophy of minimum adequate support within the existing financial framework.
2. An Intermediate Reform Program, extending the equalization principle to programs at a higher level than the state-specified minimums and allowing more fully for differences in need.
3. An Extensive Reform Program, freeing school support from local economic factors and tying it to an income-based measure of effort.
4. A Radical Reform Program with the state assuming full responsibility for school finance.

It is acknowledged that this selection is essentially arbitrary, since there exists a multidimensional continuum of possibilities. Many different combinations and mixed strategies could be developed. Nevertheless, the set of four seems to demarcate some distinct stages on the road to equal educational opportunity, thereby highlighting the major policy issues.

Descriptions of the four programs follow. The report concludes with a comparative assessment of their distributional consequences.

MODERATE REFORM: REDISTRIBUTION WITHIN THE EXISTING FRAMEWORK

The limited goal of this program is to establish a statewide "minimum adequate" level of support and to assure that all districts can obtain that support on equal terms. Details have already been laid out in Sec. V. To summarize briefly, the main elements of such a program would be the following:

1. An increase in the foundation program to a level sufficient to support a genuine "minimum adequate" or "basic" program. This level to be established according to any one of the methods described in Sec. V.
2. A uniform, statewide property tax, which (in combination with state support from general revenues) would finance the foundation program in all districts.*
3. An automatic method for adjusting the foundation program to reflect year-to-year changes in costs (e.g., annual adjustment using an appropriate cost of education index).
4. Simple adjustments for interdistrict differences in educational needs (e.g., a need factor based on AFDC recipients, as in ESEA, Title I) and in resource costs (e.g., an urban cost factor based on district size and population density).

Assuming that the foundation program were set at a realistic level, the main effect of the package would be to make it possible for a school district to operate without levying more than the statewide, uniform property tax. This would be a substantial step in the direction of equalization, since it would no longer be necessary for poor districts to set high tax rates to support minimal programs. It would still be possible, however, for districts to supplement the state-specified basic program out of local funds. In that regard, districts with high tax bases would retain their present advantages. Therefore, the expectation is that the same kind of expenditure inequalities and expenditure-tax disparities as now exist would remain, but with higher expenditure and tax rate floors and probably less interdistrict variation. As to the aggregate level of support, there is no logical need for it to increase, but it probably would as the former high-spending districts raised taxes to preserve their superior programs. Moreover, although no increase in state support is logically necessary, there would probably be demands for a new infusion of general fund revenues to compensate the "losers" of the property tax redistribution. To sum up, the expected effects of moderate reform would be higher average per pupil spending and a partial reduction in expenditure and tax rate inequality.

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*Alternatively, the same effect could be obtained by raising the minimum local tax rate required to receive foundation aid and collecting excess local support, as explained in Sec. V. The statewide property tax is the simpler and more politically attractive method.

INTERMEDIATE REFORM: EQUALIZATION BEYOND THE FOUNDATION PROGRAM

The second program is identical to the first except that it contains two more provisions equalizing educational opportunity. These are:

1. Supplementary state aid in the form of a variable matching grant to districts that voluntarily choose to tax themselves at more than the statewide rate in order to provide superior programs. The supplementary formula would be written to assure each district a certain amount of additional support (e.g., $200 per pupil) per percentage point of tax rate in excess of the required statewide rate. I.e., the state would provide the difference between that amount and the amount actually raised locally per percentage point of tax. Therefore, a poor district would have access to a superior program on the same terms as a district with a considerably higher tax base ($20,000 AV/ADA with the amount set at $200, as suggested). There would be considerably less inequality in expenditures and tax rates than if a district had to rely solely on its local property tax base for support in excess of the basic program. This would not mean full equality, however, because districts with high tax bases (more than $20,000 AV/ADA with the $200 figure) would still be able to obtain more revenue per percentage point of tax than the others. Also, the state would probably feel obliged to place a ceiling on the amount of matching funds to a district, which would further limit the equalizing effect.

2. More sophisticated adjustment for differences in resource costs and educational need. Cost adjustment factors would be developed taking into account factors affecting teacher salaries and quality, such as local cost of living and measures of district "attractiveness." Need factors would be developed taking into account finer gradations of economic and family background factors (e.g., degree of poverty, incidence of broken homes, etc.). Special data collection and analysis of relationships between those factors and school achievement would be necessary. The resulting factors would be applied to both basic and supplementary support. This would bring about a more accurate matching of resources to educational tasks, which, it is hoped, would contribute to a reduction in inequality of outcomes.

EXTENSIVE REFORM: ELIMINATION OF ECONOMIC INFLUENCES ON SCHOOL SUPPORT

This program would implement a rigorous form of "equal support for equal effort" distribution policy. A single schedule would be established linking per pupil support to local effort. The latter would be defined as the ratio of taxes paid on residential property to adjusted personal income in the district. The principal adjustment to income would be a deduction of noneducational taxes to eliminate the "overburden" effect of municipal and county taxes on school spending. Each district would determine its own rate of tax on income, which would then be translated into a property tax levy.* School tax funds would be transferred to the state for distribution according to the specified schedule. Allocations to districts would depend directly on their willingness to pay school taxes, but would not depend at all on the local tax base, pupil/population ratio, noneducational taxes, amount of business property, or other economic factors. Allowances would be made, however, for need and cost differences by applying adjustment factors (the same kind as used in the Intermediate Reform Program) to each district's allocation. A state-mandated minimum level of support and a minimum level of effort for all districts would be built into the effort-support schedule. It might be considered desirable to tax nonresidential property at a uniform statewide rate to prevent unequal treatment as a consequence of disparities in local personal income and willingness to tax.

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*In practice, this would take place with a 1-year lag, i.e., current year support would be linked to last year's rate of tax on income.

The main equity benefits of this proposal in comparison with the previous one arise from the shift to an income-based measure of effort (see Sec. V) and extension of the "equal support for equal effort" principle to encompass even the wealthiest localities. Of the programs discussed thus far, this program provides the maximum degree of equal opportunity compatible with local autonomy in determining the level of school support.

RADICAL REFORM: CENTRALIZATION AT THE STATE LEVEL

This option is so simple that there is nothing to add to what has been said in Sec. V. All school revenues would be provided by the state out of a combination of general revenues and a statewide property tax or other earmarked education tax. All districts would receive the same amounts per pupil, except for need and cost adjustments. The latter would be the same as for the Intermediate Reform Program. Local districts would not be able to supplement state support; in fact, they would have no role at all in raising revenue.

The allocative effect is evident. In comparison with the Extensive Reform Program, it is as if all districts were to display the same willingness to support education. In other words, all districts would receive support not according to their own willingness to spend, but according to average willingness throughout the state. Only in this way is it possible to equalize each pupil's opportunities everywhere in California. The price, however, is the abandonment of local autonomy to give fiscal expression to different beliefs concerning the value of education.

A COMPARATIVE ASSESSMENT

The following table (Table 6) has been prepared to facilitate comparisons among alternatives and between each reform program and the

Table 6

COMPARISON OF ALTERNATIVE REFORM PROGRAMS

	Criteria of Financial Performance					
Reform Program Descriptions	*Inequality in Expenditure Per Pupil*	*Relationship Between per Pupil Resources and Need*	*Relationship Between Expenditure Level and Tax Rate*	*Relationship Between Expenditure Level and Tax Base*	*Relationship Between Expenditure and District Willingness to Spend*	*District Ability to Tap Local Resources*
Existing System: Foundation program, local property tax	Substantial	Weak, negative relationship	Weak, negative correlation	Strong, positive correlation	Positive, but swamped by tax base differences	Unrestricted
Moderate Reform: Higher foundation program and statewide property tax	Less than existing system because of higher floor	Positive degree depends on need and cost factors	Weak, direction uncertain	Positive correlation; weaker than with existing system	Positive, but still distorted by tax base differences	Reduced by statewide property tax
Intermediate Reform: Moderate reform plus supplementary matching aid and need and cost adjustments	Probably less than moderate reform and mainly in proportion to effort	Systematic, positive relationship (except for wealthy districts)	Consistent positive relationship (except for wealthy districts)	No relationship if wealthy excluded; some positive correlation if included	Positive correlation (except for wealthy districts)	Wealthy districts retain ability; others do not
Extensive Reform: Support tied to an income-based measure of local effort	Only in proportion to differences in effort	Strongly positive, disturbed only by effort variations	Consistent positive relationship for all	None	Consistent positive relationship for all	None
Radical Reform: Full state support of programs in all districts	None	Uniformly positive statewide	None	None	None	None

existing system. Six criteria are used in assessing the financial performance of each alternative: expenditure inequality; relationships between expenditure levels and educational needs, tax rates, tax bases, and local willingness to spend; and the ability of local districts to tap local resources. The results show a definite, unidirectional progression on each criterion as one moves down the list of alternatives from the existing system to the most radical reforms.

Examining the alternatives one by one, it can be seen that the main contribution of the Moderate Reform Program is to reduce expenditure inequality by weakening districts' dependence on their own local tax bases. There is a reduction in the ability of each district to raise local property taxes because of the partial preemption of that tax source by the uniform statewide tax. This is reflected also in a weaker correlation between tax base and spending. The need-expenditure relationship also improves because of the inclusion of an explicit need factor in the package. There is little improvement in the expenditure-tax rate relationship or in the correlation between spending and willingness to pay.

The major effect of the Intermediate Reform Program is to create a linkage between tax effort and spending. Expenditure inequality still exists, but much more of the variation is attributable to differences in effort than in property value. Only the wealthier districts--those above the level of the matching grant--are able to take advantage of their local tax bases, while the others obtain funds only in proportion to tax rate or willingness to spend. The more sophisticated need and cost factors included in the package establish a systematic, positive relationship between resources and need for all but the wealthy districts. The latter continue to enjoy more resources relative to needs than other districts because of their access to higher tax bases.

The effect of the Extensive Reform Program is to neutralize the influences of the local property tax base and other economic circumstances. Local outlays depend only on willingness to spend and the need and cost adjustments. There is a single, uniform relationship between effort and support for all districts and no district has the power to realize any benefit by virtue of greater-than-average local resources.

Finally, the Radical Reform Program eliminates the effort factor as a determinant of support, leaving only the need and cost factors. As the final line in the table shows, all other relationships with local characteristics are cancelled out while support is equalized statewide.

To sum up, the progression from moderate to radical reform is one of increasing equality in both spending and taxing. First economic factors, then local preferences are eliminated as determinants of spending. Educational need is initially absent, then a contributing factor, and finally the dominant cause of expenditure variation. Educational opportunity--a concept that encompasses dollar outlays, needs, and costs--becomes progressively more equal throughout as does the burden of educational taxes. But that does not take place without loss in local autonomy and the ability of each community to use its wealth as it sees fit. There is an important choice that must be considered in determining the stopping place along the spectrum of reform alternatives.